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STOCKTON/O'FARRELL

MIXED-USE DEVELOPMENT

ENVIRONMENTAL IMPACT REPORT

DEIR
JULY 6, 1984

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ENVIRONMENTAL IMPACT REPORT

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I. SUMMARY

A. PROJECT DESCRIPTION

The project sponsor, Zaber Corporation, N.V., of San Francisco, proposes to construct an eight-story mixed-use development (primarily retail and office) at the southwest corner of Stockton and O'Farrell Streets. The project site occupies Lots 1, 2, 3, and 20 of Assessor's Block 327. The 15,125-sq.-ft. site is occupied by four low-rise buildings containing a variety of ground floor retail uses, with office and storage on the upper floors. The project would require the demolition of all buildings currently on the site, totalling about 29,400 sq. ft. of retail space, and 17,550 sq. ft. of office space. The project architects are Kaplan/McLaughlin/Diaz and T.P. Lam.

The eight-story project would be about 125 ft. tall and contain about 57,950 gross sq. ft. of retail space, 43,300 gross sq. ft. of office space, 12,450 gross sq. ft. of restaurant area and three penthouse dwelling units totalling approximately 8,500 gross sq. ft. The overall project would have a gross floor area, as defined by the City Planning Code, of about 122,200 sq. ft., resulting in a floor area ratio (FAR) of about 8.1:1. Because the project would remove about 17,550 sq. ft. of office space and 29,400 sq. ft. of retail space, it would result in a net increase of about 25,750 sq. ft. of office space, 28,550 sq. ft. of retail space, 12,450 sq. ft. of restaurant space and 8,500 sq. ft. of residential space on the project site.

The main building entrance would be at the corner of Stockton and O'Farrell Sts. An office lobby would be accessible from Stockton St. Additional entrances may be provided to serve the ground-floor retail uses. Access to two off-street loading spaces would be from O'Farrell St.

Demolition of the existing buildings on the site, proposed to begin in 1986, would take about four weeks. Construction would then continue for approximately 18 months until project completion and full occupancy in 1987.

B. MAIN ENVIRONMENTAL EFFECTS

ZONING AND PLANNING

The site is in the Downtown Retail (C-3-R) Use District and a 320-I Height and Bulk District. The project would comply with existing use, height and bulk limitations. The project would generally be consistent with the objectives of the San Francisco Comprehensive Plan. The building would comply with ground-floor use and maximum height guidelines set forth in the proposed Downtown Plan, but would exceed the Downtown Plan's proposed bulk limitations and basic Floor Area Ratio. The project would conform with the Downtown Plan's proposed requirements for provision of open space, but would not conform with the Plan's solar access criteria for Stockton and O'Farrell Sts.

URBAN DESIGN

The proposed project would not be visible from long-range viewpoints, nor would it obstruct any views of nearby open spaces (Union Square or Hallidie Plaza), or of the San Francisco Bay from public areas. The project would replace four buildings on the site, which reflect the scale and design of older (1906-1930) buildings in the proposed Kearny-Market-Mason-Sutter Conservation District. The project would have a height and scale compatible with the newer buildings of the Retail District's core (Macy's, Liberty House, Joseph Magnin's, Nieman Marcus, Grodins). It would include traditional design features reflecting those of older buildings in the Retail District: strong cornice definitions, varied window openings and classical facade detailing. Its rounded corner entrance at Stockton and O'Farrell Sts. would provide pedestrian interest.

ARCHITECTURAL RESOURCES

The proposed project would require demolition of four buildings. The 55 Stockton St. building and the 107-111 O'Farrell St. building are rated "C", and the Imperial Realty Building (the Leed's Building, at 65 Stockton St.) is rated "C**" (the original building has been extensively altered from its "B" condition, to a "C" condition, but could be restored), by the Foundation for San Francisco's Architectural Heritage's Splendid Survivors survey. The Imperial Realty Building is included in the City's List of Architecturally and/or Historically Significant Buildings in the Downtown. None of the site buildings is rated in

the 1976 Department of City Planning survey. The Imperial Realty Building, the 55 Stockton St. building and the 107-111 O'Farrell St. building are considered Category IV, contributory buildings, by the proposed Downtown Plan. The Downtown Plan states that "while preservation of contributory buildings is desirable and would be encouraged by allowing their owners to transfer unused development rights, their importance is not so great as to justify a requirement that they be retained." (p. 71 of the Downtown Plan).

TRANSPORTATION, CIRCULATION AND PARKING

The project would generate about 2,004 new person-trip ends per weekday. About 210 new outbound trips would occur in the peak period, and 132 during the p.m. peak hour.

Transit ridership generated by the project would be about 0.3% of the projected total demand on the trasnit carriers in the year 2000. Peak-hour and peak-period passenger loadings would be worse than in 1984, although most systems would operate in acceptable conditions.

Sidewalk operations, currently in the impeded and unimpeded range on Stockton St. and O'Farrell St. during both the noon hour and the p.m. peak hour, would continue in this range in the year 2000 with predicted pedestrian volumes. Pedestrian increases from the project represents from 3.4% to 14% of these volumes. Crosswalk operations at the Stockton St. and O'Farrell St. intersection would continue in the impeded range and constrained range in the year 2000 with predicted pedestrian volumes during the noon peak hours; during the p.m. peak hour the Stockton St. crosswalk would continue in the impeded range and the O'Farrell St. crosswalk would increase from the impeded to the constrained range in the year 2000. Pedestrian increases from the project would represent 3.5% to 14% of these volumes.

The project would generate about 18 p.m. peak-hour vehicle trip-ends. This would represent about 0.03% of the total vehicle trip-ends in each corridor for the year 2000.

The project would imperceptibly lessen the Level of Service of traffic operation on the street system relative to future conditions. The analysis indicates that the intersection of Market and Fourth Sts. is operating at vehicular Level of Service "B" during the p.m. peak hour (and p.m. peak period). The intersection of Harrison and Fourth Sts. operates at Level of Service "C" during the p.m. peak hour. Peak-hour conditions would be expected

to deteriorate at both of the intersections by the year 2000. Expanded areas of traffic congestion would disrupt surface Muni operations. If the mitigation measures for transportation are implemented, the intersection operating conditions would be improved.

At present, 94% of the 48,000 parking spaces in the C-3 District are occupied. The C-3 District would generate a demand for approximately 58,000 equivalent parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. The project parking demand would represent less than 0.2% of the total demand in the C-3 District.

AIR QUALITY

Project-related vehicular traffic would add to cumulative regional pollutant emissions. The project would not conflict directly with control strategies of the 1982 ABAG Bay Area Air Quality Plan and, of itself, would have no measurable impact on citywide or regional pollutant concentrations or on the frequency of standards violations. It would impede the objectives of the plan to the extent that it would generate additional pollutant emissions in San Francisco and the Bay Area. Although the project, in conjunction with cumulative development, would add to carbon monoxide (CO) concentrations, the projected effects of existing State and Federal emission controls on new vehicles would more than offset the growth in emissions due to increased traffic volumes.

ENERGY

The project would consume about 316,000 Btu per sq. ft. annually. Both the commercial and residential portions of the project would conform with either the performance or prescriptive standards of Title 24 of the California Administrative Code. Site development, fabrication and transportation of building materials, worker transportation, and building construction would require about 150 billion Btu of gasoline, diesel fuel, natural gas, and electricity.

GROWTH INDUCEMENT, EMPLOYMENT AND FISCAL FACTORS

The project would displace 10 existing on-site businesses that provide 110 jobs. These jobs are mostly retail-sector. After completion, the project would accommodate a total of about 360 permanent full-time jobs, an increase of 250 for the site. About 56% of the jobs would be retail and restaurant jobs; the remaining 44% would be office jobs. The project would require about 78 person-years of construction labor.

The project, after occupancy in 1987, would generate about $600,900 annually in total property, payroll, sales, gross receipts and utility tax revenues to the City's General Fund, a net increase of about $449,000.

The project would probably have an initial fiscal benefit to the City. Because revenues would probably increase at a slower rate than costs, as a result of Proposition 13 limitations on property tax increases, cumulative costs of providing services to currently proposed and approved development could eventually overtake the revenues generated. This conclusion is based on assumptions that no new revenue sources are found, costs of city services increase, the rate of new development declines or remains constant and properties change ownership infrequently, preventing an assessment of sites at current market values.

C. MITIGATION MEASURES

The major mitigation measures included in the proposed project are listed below; the complete list of measures included or not included is found in Section V, p. __.

- The project would feature a facade composition and ornamentation designed to enhance the pedestrian environment in the Retail District.

- Should Ordinance 224-81, which would require the sponsor to contribute funds for maintaining and augmenting transportation service in an amount proportional to the demand created by the project, be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted in lieu thereof that are equitable and legal, which the City adopts to apply to all developments which are similarly situated.

- A member of the building management staff would be designated as a "transportation broker" to coordinate measures that are part of a transportation management program. Use of transit facilities would be encouraged by the on-site sale of BART, MUNI, and Golden Gate Transit passes. Carpooling/vanpooling and flex-time would also be encouraged.

- Construction truck traffic would be regulated to avoid peak-hour traffic congestion. Construction activity would be coordinated with other concurrent projects to minimize cumulative traffic effects of lane closures and street excavation.

- The project sponsor would install energy-saving devices, such as a variable-air-volume air conditioning system and an air or water economizer cycle system.

Measures Not Included in the Project

- The project would not include the following energy consumption mitigations, unless further studies would determine that they are cost-effective:

    - A solar water heating system
    - A recycling center
    - A connection to the Stockton St. district heating system
    - An energy audit by PG&E after the first year of project operation to determine further conservation measures.

- The project would have two off-street loading spaces with a curb cut of 24 feet. The number of loading spaces would meet City Planning Code requirements. The project would not comply with loading space requirements adopted as policy by the City Planning Commission in Resolution No. 9286, which would require four loading spaces for the project. The 24-foot curb cut would conform with the maximum 36-foot curb cut specified in Resolution No. 9286. This measure is currently under consideration by the project sponsor. A determination of the final number of loading spaces for the project will be made after the final size of the seventh-level restaurant is established.

- A building setback of four feet on the Stockton St. project frontage would improve pedestrian conditions on the Stockton St. sidewalk from those conditions projected for the project without the setback. The pedestrian flow "regimen" would not change for any of the four periods analyzed, but the pedestrians per foot per minute would decrease with the wider sidewalk. This measure has been rejected by the project sponsor, because the benefits to be gained do not appear to outweigh the costs of the loss of some of the project's most valuable retail space, and because it would be inconsistent with the existing architectural contrast of the downtown retail core which features street walls to the sidewalk level.

D. ALTERNATIVES TO THE PROPOSED PROJECT

1. NO-PROJECT ALTERNATIVE

The no-project alternative would preserve options for future development at the site. Environmental characteristics of this alternative would be the same as with current conditions plus cumulative Downtown development.

2. PRESERVATION ALTERNATIVE

This alternative would preserve the three-story building at 65 Stockton St., which currently houses the Leeds Shoe store on the ground floor and offices on the second and third floor. As is discussed in the text, this building has been rated "C**" by Heritage, and is on the City Planning Commission's List of Architecturally and/or Historically Significant Buildings in the Downtown. This alternative, like the project, would be a mixed use, office/retail development but would contain no restaurant or residential uses. It would have 58,230 sq. ft. of retail on four levels, including a basement level (under the areas of new construction only), 60,010 sq. ft. of office on five levels and a mechanical penthouse level. It would be 106 ft. tall to the top of the eighth floor, excluding the mechanical penthouse. Two loading spaces would be provided (one is required by the Planning Code, two by City Planning Code resolution 9286). The building would step in at the seventh and eighth floors on both the Stockton St. and O'Farrell St. frontages. The mechanical level would have a hipped roof. The three-story existing building would define the corner. Because floor-to-ceiling heights would be determined by those in the retained building, this design would not have a high-ceilinged ground floor.

This alternative would have less bulk than the project. It would appear as a tall building between two shorter buildings (the 65 Stockton St. building is about 40 ft. tall and the building adjacent to the project site on the south is about 50 ft. tall) and would provide less of a visual relationship to buildings on facing corners, buildings which, in height and massing, are similar to the project as proposed. (Buildings on facing corners are 80 to 105 ft. in height and occupy lots with greater street frontages than the site buildings.) This alternative would provide employment for about 390 people, 30 more than the project.

Environmental effects would generally be similar to those identified for the project, because of the similarity in use areas. This alternative would generate 92% of the daily person trip ends generated by the project; of these, the number of auto trips would be about the same, while Muni trips would be more numerous (112% of those estimated for the project). This alternative would result in the restoration of the previous "B" rating to the Imperial Realty Building (65 Stockton St.). The "C"-rated buildings on the site would be demolished, as with the project. This alternative would have shadow impacts somewhat less pronounced than those of the proposed project and somewhat more pronounced than those for the Downtown Plan Alternatives (see below).

3. DOWNTOWN PLAN CONFORMING DESIGN

This alternative has been designed to conform to proposed controls and design guidelines for C-3-R districts put forth in the Department of City Planning's Downtown Plan, published in August 1983. The Downtown Plan reduces the basic allowable FAR governing the site from 10:1 to 6:1 (the project has an FAR of 8:1). This alternative would conform with the basic FAR of 6:1. The Downtown Plan would change the Height and Bulk District to 80-130F. In this height district, buildings could be 80 ft. tall as a matter of right. Heights above 80 ft. would be allowed as Conditional Uses only, up to a maximum of 130 ft. Sun access angle limitations in the Plan applicable to the project site would further require that the building have a maximum streetwall height of 66 ft. on the south side of O'Farrell St., and of 65 ft. on the west side of Stockton St. The proposed Planning Code amendments to implement the Downtown Plan would permit ground-floor offices offering on-site services to the public in the C-3-R district if they were less than 5,000 sq. ft. in size. Those offices larger than 5,000 sq. ft. would need conditional use authorization. Open space would be required in the amount of one square foot to each 100 sq. ft. of new building area in the C-3-R District, the zoning district in which the project site is located.

This alternative would contain a total of 89,540 sq. ft., including 60,060 sq. ft. of retail space on four levels (including a basement level) and 29,500 sq. ft. of office in three levels. This Alternative would include two loading spaces, in conformance with both the proposed Downtown Plan and current Planning Code requirements. The building would be 97 ft. tall excluding the seventh-level mechanical penthouse; a Conditional Use Authorization would be required to exceed the base 80-ft. height limit under the Downtown Plan. All floors above the third (above 58 ft.) would be stepped; the mechanical penthouse would form a hipped roof. This alternative, like the proposed project, would require demolition of all rated buildings on the project site.

The Stockton St. frontage would be set back four feet from the property line at the ground floor, with the upper stories cantilevered over the setback. This would have the effect of widening the current 15-ft. Stockton St. sidewalk to 19 ft. Open space of about 900 sq. ft. would be incorporated as view and sun terraces, compared to about 1,600 sq. ft. in the project.

This alternative would provide about 280 jobs; retail employment would be similar to that of the project, while office employment would be reduced by about one third. Revenues and costs to serve the project would be similarly reduced.

This alternative would result in 1,370 person trips, 100 daily automobile trips, 180 Muni trips, a reduction of about 30% from project traffic and transit effects. Additionally, this alternative would generate about 30% fewer pedestrian trips. Air quality effects would be similarly reduced. Energy consumption would be less than with the project. The Stockton St. ground-floor setback would provide additional pedestrian space at the corner and along the site's Stockton St. frontage.

4. ALTERNATIVE CONFORMING WITH DOWNTOWN PLAN DESIGN GUIDELINES BUT FOR TRANSFER OF DEVELOPMENT RIGHTS (TDR)

This alternative would be the same as in design Alternative 3, except that it would incorporate additional floor area through the use of transferred development rights (TDR) (see Figure 28, p. 135). The Downtown Plan would expand the use of TDR so that unbuilt basic allowable floor area could be transferred from Category I and II buildings. However, the Downtown Plan provisions also prohibit the transfer of any development rights unto project sites which contain significant or contributory buildings. This project

alternative would therefore remain inelegible for the receipt of TDR's as long as the on-site buildings remain rated. The design proposed under this alternative would otherwise conform to the Downtown Plan. This alternative would have an FAR of about 8.42:1, with a total of 127,450 gross sq. ft. It would contain 57,650 sq. ft. of retail uses and 65,650 sq. ft. of office uses. In addition, it would contain 4,136 sq. ft. of residential area in the two top floors. The building would have a height of 130 ft., five feet more than the project, and would require a Conditional Use Authorization for the height above 80 ft. It would be ten stories tall, with stepped levels above the third floor, like Alternative 3 (see Figure 28, p. 135). This alternative includes the four-foot ground-floor setback along the Stockton St. sidewalk featured in Alternative 4.

Environmental effects of this alternative, except for shadow impacts, would be similar to those of the proposed project. The transportation effects of this Alternative would closely resemble those of the project, except that MUNI travel and auto travel from this alternative would be about 10% higher than from the project. Shadow effects would not differ from those caused by Alternative 3, aside from barely discernable increases in shadow lengths, because of the setback arrangement of the two additional top floors. This alternative, like the project, would require the demolition of all rated buildings on the site.

This alternative has been rejected by the project sponsor, because at upper floors, it does not provide the floor area available under the existing City Planning Code provisions for the site, because the ground-floor setback would reduce the rentable retail area, and, because in the sponsor's opinion, the project provides a better relationship to facing corner buildings.

II. PROJECT DESCRIPTION

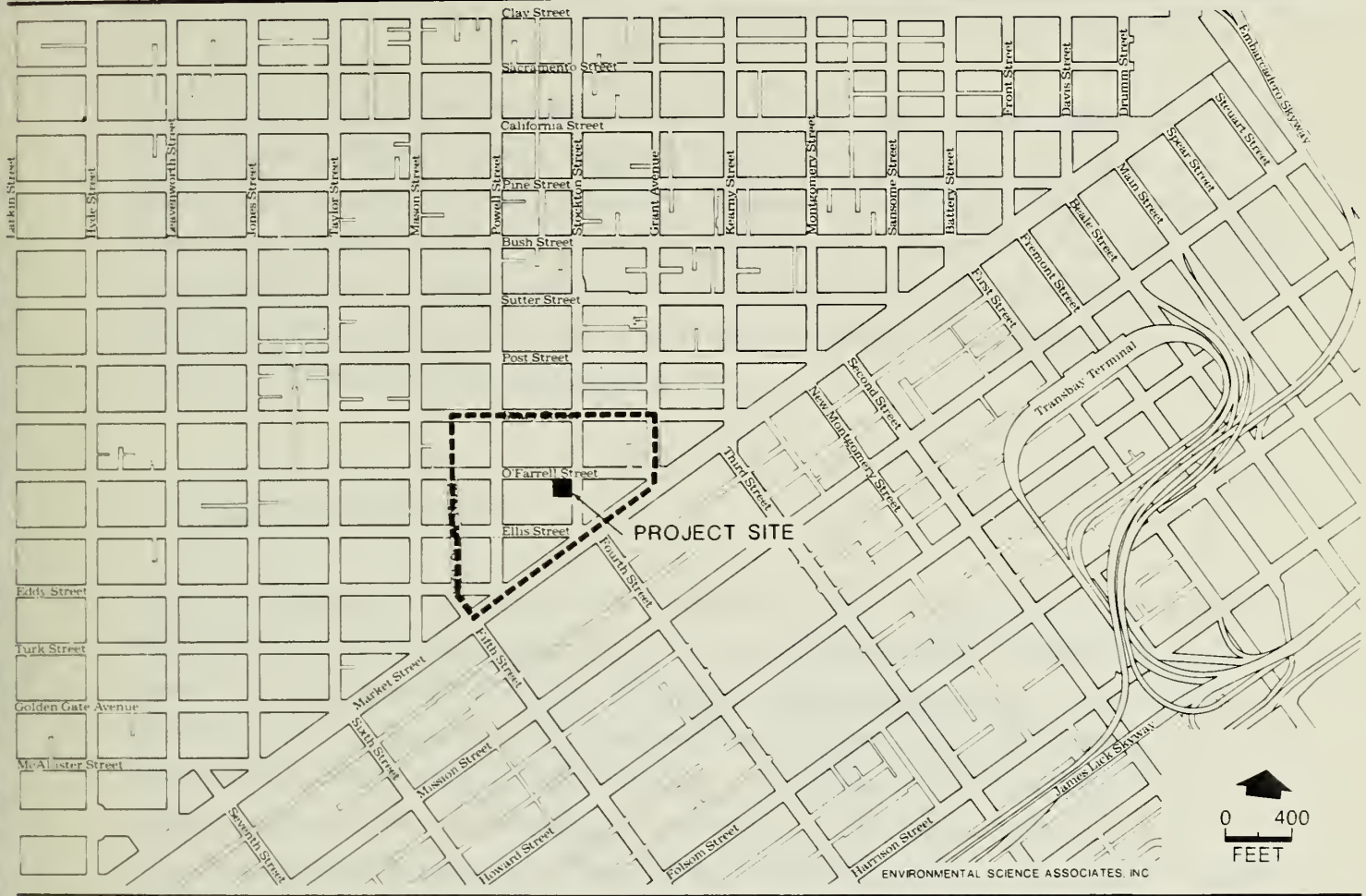
A. SPONSOR'S OBJECTIVES

The project sponsor, Zaber Corporation, N.V., proposes to construct an eight-story mixed use development with retail, office and residential uses. The sponsor's objectives are to realize a reasonable return on investment, maintain and strengthen the existing Union Square retail core, to provide an increased amount of high-quality retail uses at lower levels of the building, to meet a perceived demand for a high-class restaurant, to provide a small amount of new local, high-quality office space, and to provide increased employment opportunities in the retail, office and related trade sectors. The project architects are Kaplan/Mc Laughlin/Diaz and T.P. Lam of San Francisco.

B. PROJECT LOCATION

The project site consists of Lots 1, 2, 3 and 20 of Assessor's Block 327, at the southwest corner of the intersection of Stockton and O'Farrell Sts., City and County of San Francisco (see Figure 1). The site contains about 15,125 sq. ft., with a 110-ft. frontage on Stockton St. and 137.5 ft. on O'Farrell St.

The site is located in the center of the San Francisco C-3-R (Downtown Retail) District, as defined by the San Francisco Planning Code, Section 210.3. The site is in a 320-I Height and Bulk District, with a maximum permitted height of 320 ft. The maximum allowable base Floor Area Ratio (FAR) on the site is 10:1. Above a height of 150 ft., the maximum permitted horizontal diagonal dimension is 200 ft., and the maximum permitted building length is 170 ft. The northern boundary of the Retail District is mid-block between Sutter and Bush Sts., about three blocks north of the project site; the western boundary is mid-block between Mason and Powell Sts., about one block west of the site. Macy's department store is located directly across O'Farrell St. (to the north) from the site, and Joseph Magnin's department store is located east across Stockton St. Liberty House is located diagonally across the Stockton/O'Farrell Sts. intersection from the site.



PROJECT SITE
(Assessor's Block 327, Lot Nos. 1, 2, 3, & 20)

FIGURE 1:
STOCKTON - O'FARRELL PROJECT LOCATION

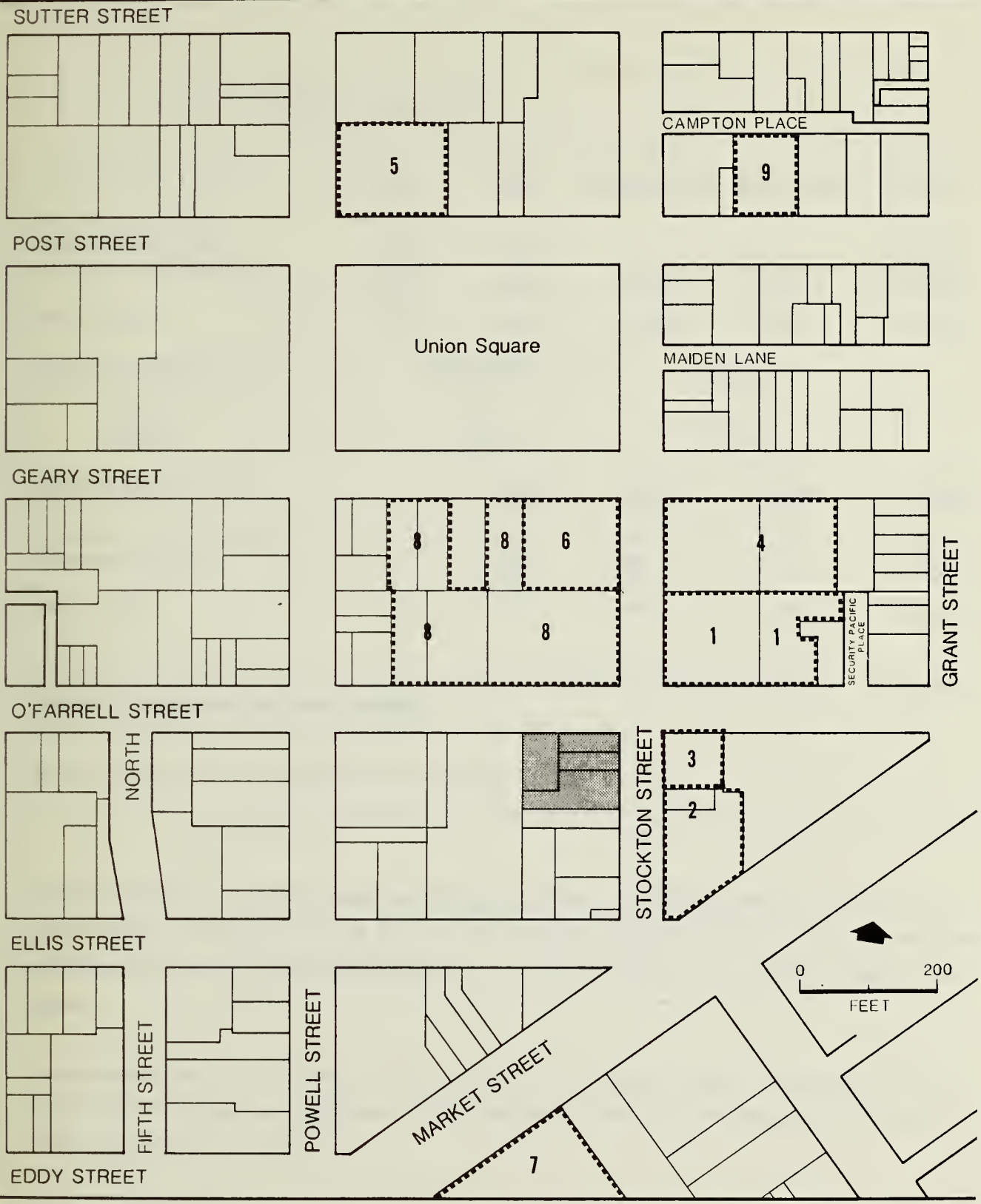
SOURCE:
Environmental Science Associates, Inc

The project's location with respect to Union Square and major retail establishments in the area is shown in Figure 2. Union Square is located one block north of the site. Commercial and hotel structures, generally between four and eight stories in height, are located to the west. Market St. is one block south of the project site. The four existing buildings on the site, ranging from two to four stories, contain retail, restaurant and office uses. (For a detailed description of buildings currently occupying the site, see Section IV. C. Architectural Resources, p. ***.)

C. PROJECT DESCRIPTION

The four buildings on the site would be demolished to allow construction of the proposed project. They are: 41-51 Stockton St., a two-story building; 55-59 Stockton St., a three-story building rated "C" in the 1979 study, Splendid Survivors, prepared for the Foundation for San Francisco's Architectural Heritage (Heritage); 65 Stockton St. (at O'Farrell St.), a three-story building rated "B" by Heritage until July 1983, when its architectural merit was reevaluated and its rating was changed to "C**" (see Section III.C. Architectural Resources, p. ***); and 107-111 O'Farrell St., a four-story "C"-rated building (see Figure 12, p. ***, for a photograph of these existing buildings). These buildings contain a total of about 29,400 sq. ft. of retail space and 17,550 sq. ft. of office space. The Heritage rating scale has a high of "A" and a low of "D". See Appendix B, p. A-**, for a discussion of this rating system.

Project characteristics are summarized in Table 1. The 125-ft.-tall building would consist of eight above-ground stories and two subsurface levels. The lower basement level would be devoted to mechanical operations, a water storage tank, and building maintenance equipment. The upper basement level would contain retail uses only. Neither basement level would extend under the adjacent sidewalks. The ground floor would feature the primary pedestrian entrance at the corner of O'Farrell and Stockton Sts. Another entrance would serve the office lobby at the southern property line along Stockton St. Additional entrances might be added along Stockton or O'Farrell Streets to serve ground-floor retail establishments. Final placement of entrances to the ground floor would depend on the specification of retail stores renting space in the proposed project. The ground floor would also contain other retail uses, pedestrian circulation areas and two loading spaces at the western property line along O'Farrell St. Escalators would



	A8=	Address
1. Liberty House	313	Stockton/O'Farrell Sts.
2. Grodins	328	798 Market St.
3. Joseph Magnin's	328	46-68 Stockton St.
4. Neiman Marcus	313	150 Stockton St.
5. Saks' Fifth Ave	295	384 Post St.
6. I.Magnin	314	Geary/Stockton
7. Emporium	3705	835 Market St.
8. Macy's	314	101 O'Farrell St.
9. Gump's	294	250 Post St.

SOURCE:
Environmental Science Associates, Inc.

FIGURE 2: STOCKTON-O'FARRELL MAJOR RETAIL ESTABLISHMENTS IN THE PROJECT VICINITY

TABLE 1: PROJECT CHARACTERISTICS

Gross Square Feet /a/:	Office	Retail	Restaurant	Residential	Total
Existing Buildings Demolished Total	17,550	29,400		--	46,950
Proposed New Building	43,300	57,950	12,450	8,500	122,200
Net Change	25,750	28,550	12,450	8,500	75,250

Project Dimensions:	Permitted	Proposed
FAR /b/	10:1	8.1:1
Height	320 ft.	125 ft.

On-Site Employment	Office	Retail	Other	Total
Existing to be Displaced	10	38	68	113
Proposed Project	160	200	--	360
Net Change	150	162	68	247

/a/ Does not include areas exempt from FAR calculations, such as mechanical areas and building storage, parking and loading.
/b/ 8.1:1 FAR, based on site area of 15,125 sq. ft.

SOURCE: Environmental Science Associates, Inc.

connect the first subsurface level and the ground floor with the second and third levels, where retail space would also be located. Handicapped access to the retail areas would be provided by elevators from the lobby area. Levels four, five and six would contain office space.

A restaurant would be located on level seven, and level eight would be devoted to three one-bedroom residential penthouses. The roof level would contain mechanical equipment. (See Figures 3-8, pp. **-**.)

The new building would include 57,950 gross sq. ft. of retail space, 43,300 gross sq. ft. of office space, 12,450 gross sq. ft. of restaurant area and three penthouse dwelling units totalling about 8,500 gross sq. ft. Because the project would remove about 17,550 sq. ft. of office space and 29,400 sq. ft. of retail space, it would result in a net increase of about

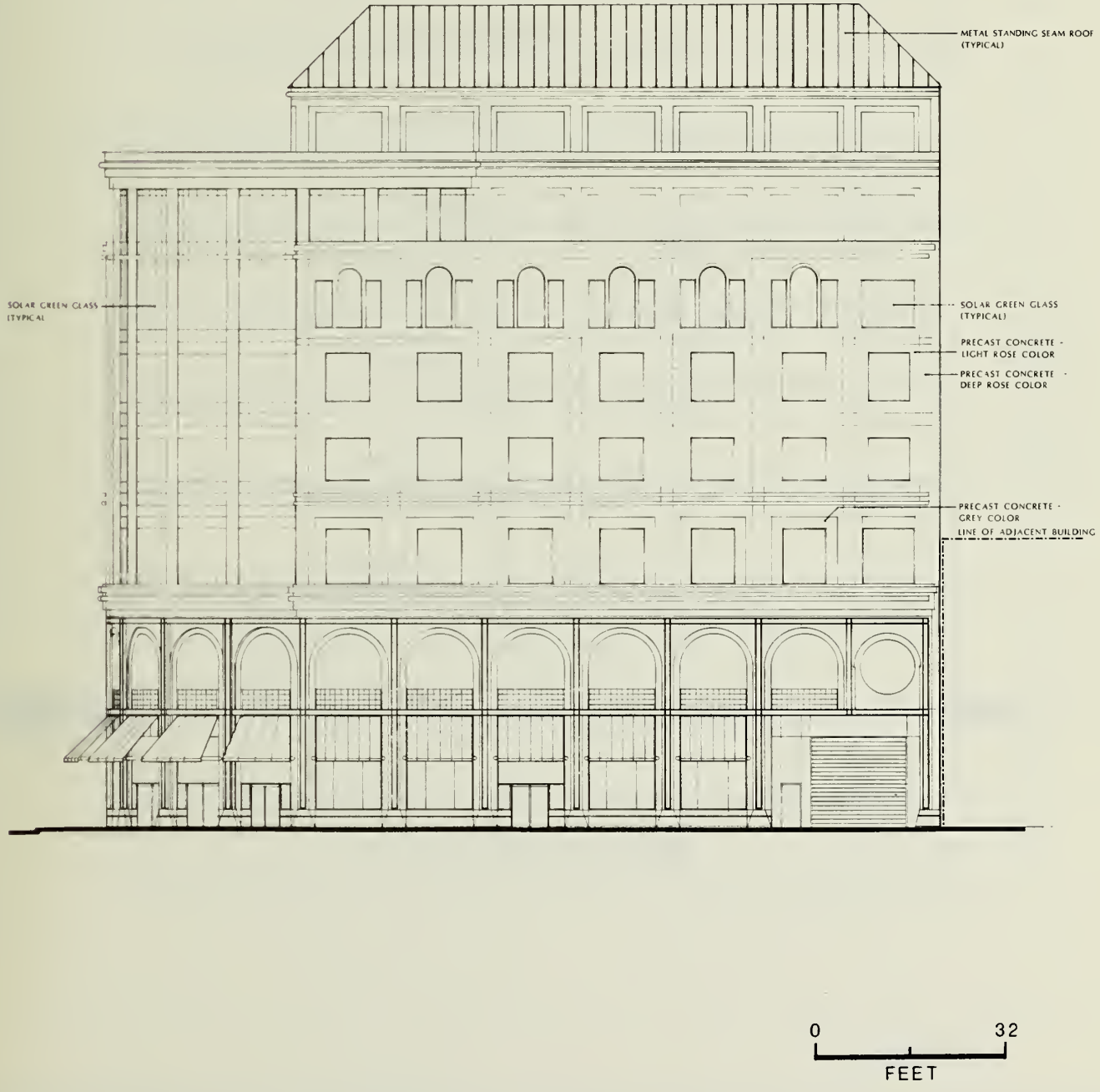


FIGURE 4:
O'FARRELL STREET ELEVATION

SOURCE:
Kaplan/McLaughlin/Diaz

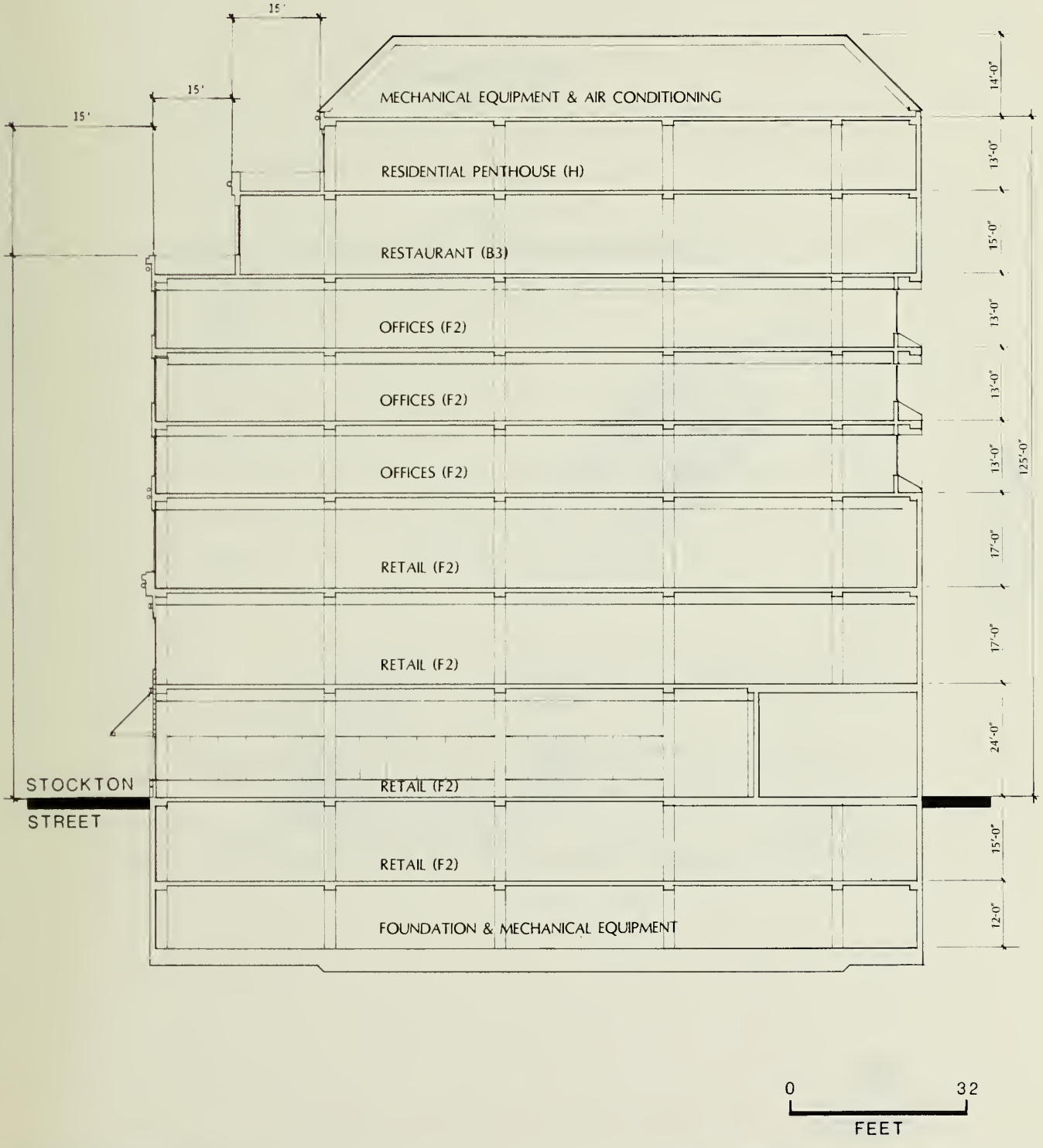


FIGURE 5:
BUILDING SECTION

SOURCE:
Kaplan/McLaughlin/Diaz

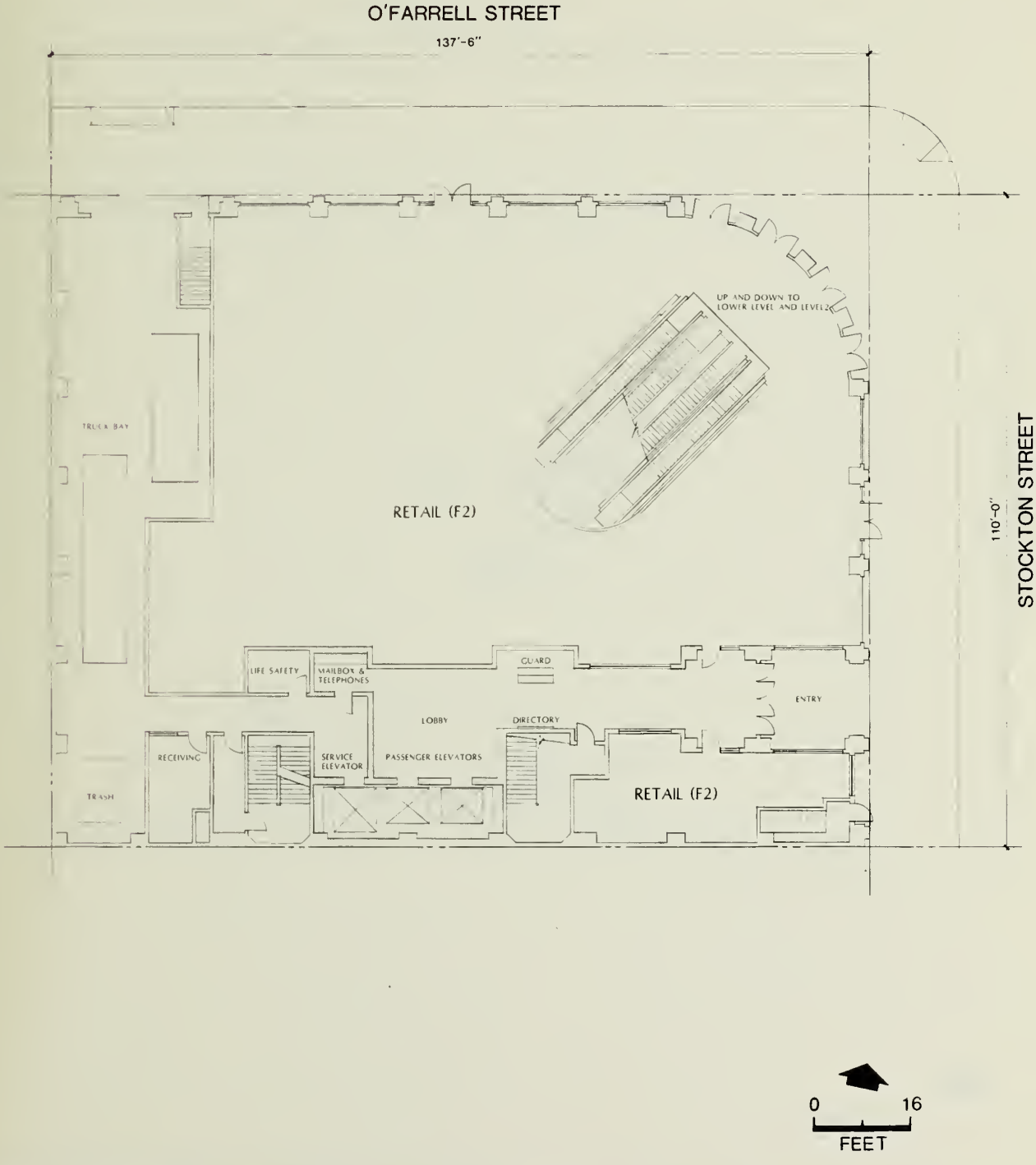


FIGURE 6:
STOCKTON/O'FARRELL
GROUND FLOOR PLAN

SOURCE:
Kaplan/McLaughlin/Diaz

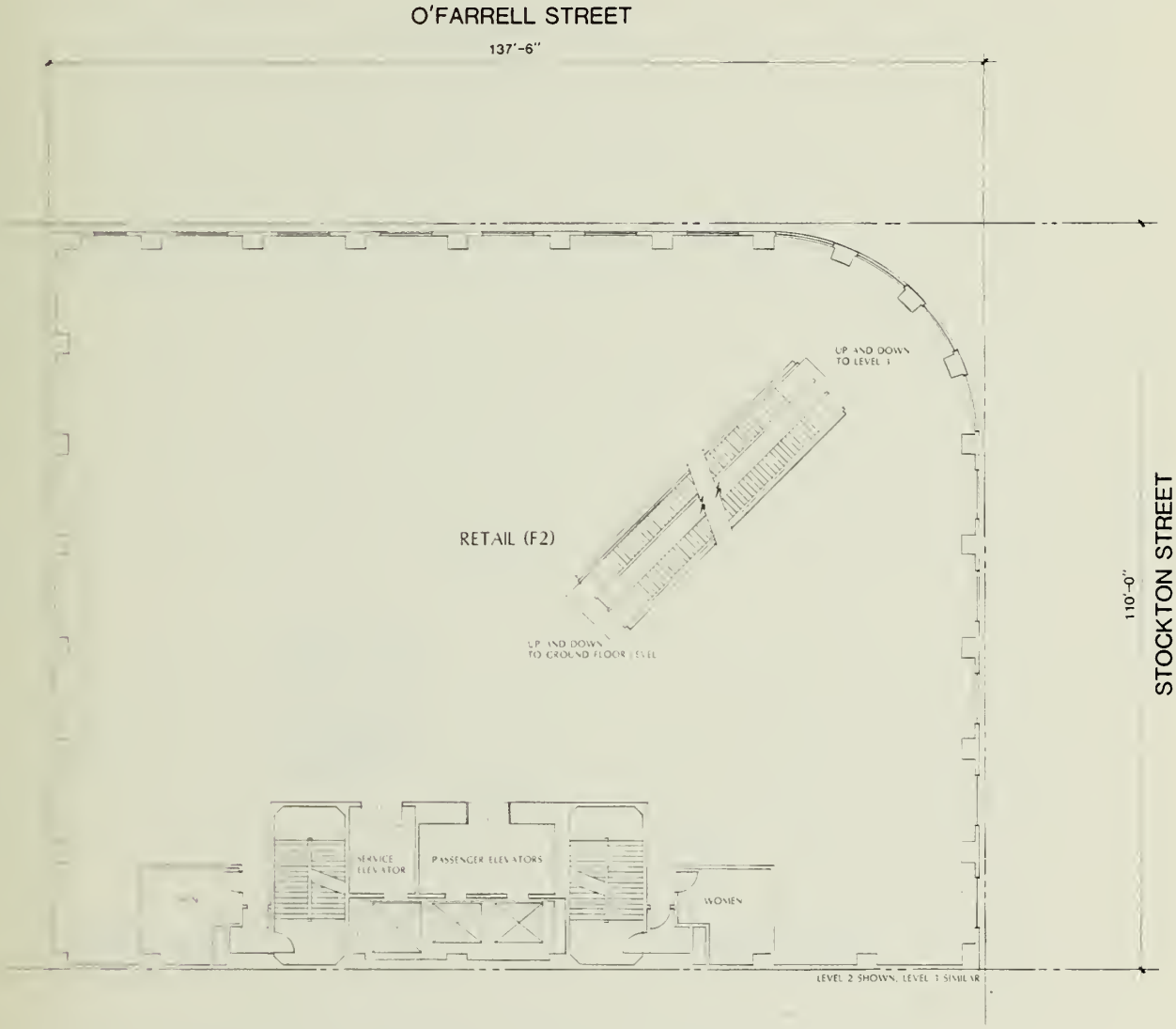


FIGURE 7:
STOCKTON/O'FARRELL
TYPICAL RETAIL FLOOR PLAN

SOURCE:
Kaplan/McLaughlin/Diaz

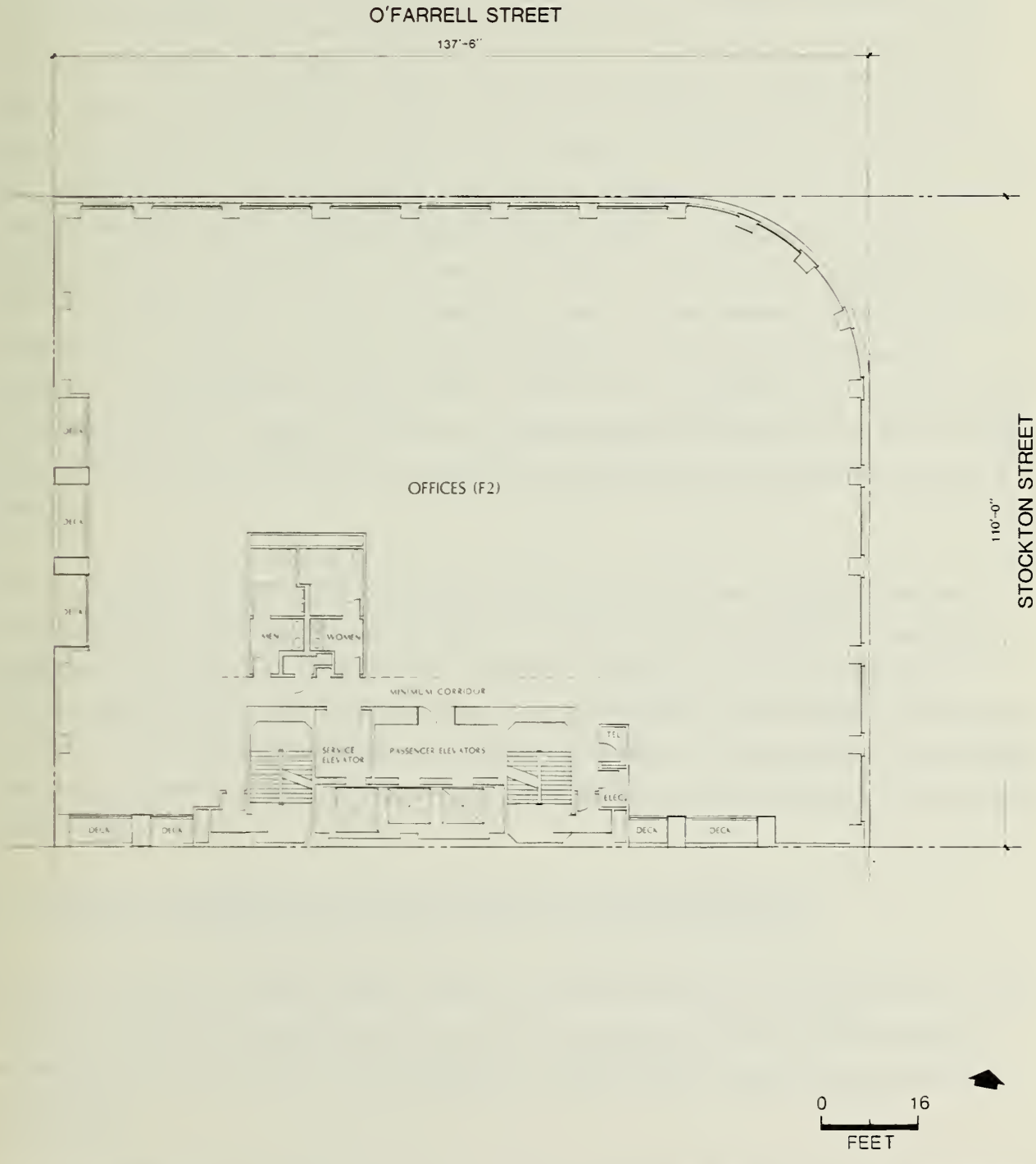


FIGURE 8:
STOCKTON/O'FARRELL
TYPICAL OFFICE FLOOR PLAN

SOURCE:
Kaplan/McLaughlin/Diaz

25,750 sq. ft. of office space, 28,550 sq. ft. of retail space, 12,450 sq. ft. of restaurant space, 8,500 sq. ft. of residential space, and 1,600 sq. ft. of public open space on the project site.

The project design would be set back from Stockton St. in two steps beginning at the seventh and eighth levels (see Figures 3, 4, and 5, pp. 18, 19 and 20). The eighth-level penthouse, covered by a hipped roof,/1/ would be surrounded by a large open terrace. Level seven, although separated from the penthouse by a strongly defined cornice line, would continue its vertical composition and rectangular window designs (see Figures 3 and 4). Separated from the seventh-level restaurant by another less-pronounced cornice line, the mid-section of the building (comprised of levels three through five) would be in light-colored pre-cast concrete, with tinted windows. The mid-section of the building would be differentiated from the top section by semi-circular window openings along the sixth floor. Levels three and four of the mid-section would feature square window openings. The building base (levels one and two) would be separated from the mid-section by another cornice. Large semi-circular window openings would define the second level, while the first level would feature decorative awnings along all windows (see Figures 3 and 4).

The northeastern corner of the building at all levels would differ in design from the remaining part, by having more glass and a rounded corner to emphasize the pedestrian entrance at Stockton and O'Farrell Sts. The large, rounded corner at Stockton and O'Farrell Sts. would be used to give a strong sense of identity to the building, recalling the rounded corners of major department stores of an earlier era. The rounded corner would also reflect those of newer building around Union Square, such as Neiman Marcus and Saks Fifth Avenue.

D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS

The project sponsor expects project review and detailed design to be complete by the end of 1984. Demolition and construction is proposed to begin in 1986. The construction schedule is planned as follows (note that there would be some overlap among several phases):/2/

-	Site Clearing	4 weeks
-	Excavation	22 weeks
-	Foundation Preparation	15 weeks
-	Steel Erection	11 weeks
-	Exterior Closure	13 weeks
-	Exterior Finishing	13 weeks
-	Interior Finishing	17 weeks
-	Initial Occupancy	80 weeks after construction start

Project construction costs would be about $11 million in 1984 dollars./2/ Retail space is expected to rent for an average of about $32 per sq. ft., office space for about $21 per sq. ft. Restaurant space is expected to rent for about $18 per sq. ft./3/ The three penthouse units would be retained by the building owner.

Following public review and a public hearing on this EIR, the City Planning Commission must certify the EIR as complete, accurate and objective. Under its current policy of Discretionary Review of all downtown high-rise buildings during the period of Interim Controls, the Commission would then review the building design and its environmental context, and adopt a resolution approving, approving with conditions, or disapproving the project./4/ Upon project approval, the project sponsor would obtain demolition, site, building, fire, electrical, and related permits from the Central Permit Bureau of the Department of Public Works.

On February 3, 1984, the Board of Supervisors adopted interim controls (Ordinance No. 54-84) which prohibit, among other things, (until August 25, 1984) approval of permit applications for demolition of buildings"...rated by the Foundation for San Francisco Architectural Heritage as 'A' or 'B', or rated 'C' if the 'C' rated buildings are located in a Conservation District proposed in the Downtown Plan unless, as to any such 'C' rated building, the City Planning Commission finds that the replacement building appropriately maintains the character of the district." Because the Imperial Realty Building (64 Stockton St.), the 55 Stockton St. building and the 107-111 O'Farrell St. building are all "C"-rated buildings in a proposed Conservation District, approval of demolition permits for these buildings would require such a finding by the City Planning Commission while interim controls are in effect.

NOTES - Project Description

/1/ A hipped roof slopes down from a straight-line top in four directions.

/2/ S. R. Van Deursen, Project Manager, Construction Management Services, Williams & Burrows, Inc., Construction Managers, letter dated November 4, 1983.

/3/ Albert Tai, General Manager, Zaber Corporation, N.V., letter dated January 9, 1984. The restaurant space will likely command a smaller rent than the office or retail space because of its location six stories above ground level.

/4/ City Planning Commission Resolution No. 8474, January 17, 1980. Board of Supervisors Ordinance 240-80, June 1, 1980, established interim limitations on use of floor area bonuses for office uses, until July 1, 1981. This ordinance was subsequently extended to May 1, 1984. Floor area bonuses may be granted for residential or hotel uses.

III. ENVIRONMENTAL SETTING

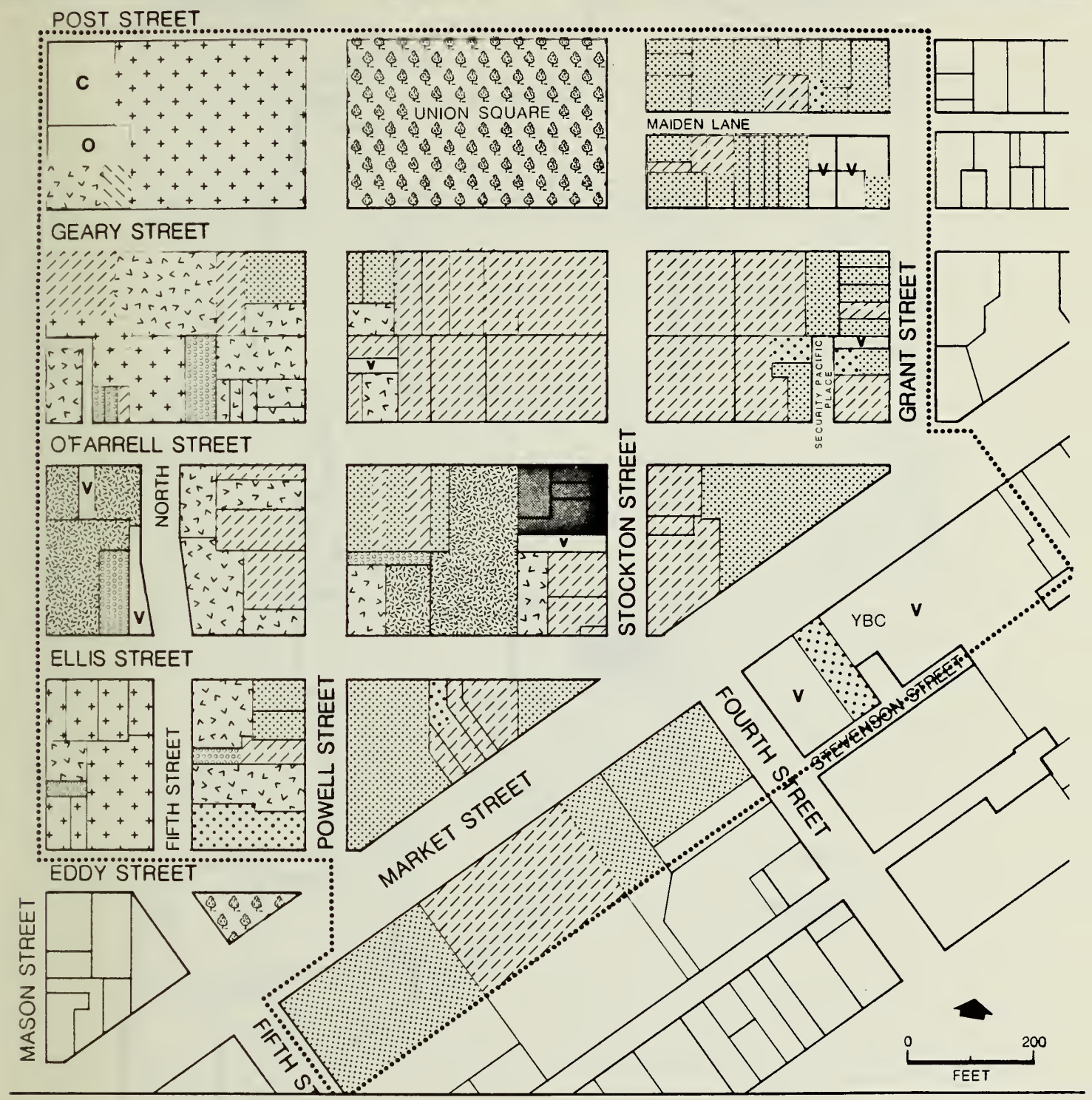
A. LAND USE AND ZONING

LAND USE

The project site is located in the middle of the area designated by the Department of City Planning as the San Francisco Retail District. This district is characterized by large department stores, hotels, restaurants, and some office uses. Union Square, one block north of the project site, is the center of the retail district. The following department stores are the immediate vicinity of the project site: Macy's, directly across O'Farrell St. to the north of the project site; Liberty House (now Macy's), northeast of the project site across the Stockton and O'Farrell Sts. intersection; Joseph Magnin's, across Stockton St. directly east of the project site, and Grodin's, across Stockton St. southeast of the project site. Other major department stores in the project vicinity include Neiman-Marcus, I. Magnin's, Gump's, Emporium Capwell and Saks Fifth Ave. (see Figure 2, p. **). Directly west of the project site is a 2-story parking garage. Existing land uses on site include neighborhood-serving retail uses such as groceries, a bakery, a coffee shop, a candy store, and a sewing shop. Existing land uses near the project site are shown in Figure 9.

CITY PLANNING CODE DESIGNATIONS

The City Planning Code Use Classification for the project site is C-3-R, Downtown Retail District (see Figure 10). The C-3-R District permits a variety of uses, including residential, hotel, retail, offices and entertainment. The basic allowable Floor Area Ratio (FAR) (ratio of allowable floor area to site area) for buildings in a C-3-R District is 10:1 (Section 124 of the City Planning Code). Under the Interim Controls on downtown high-rise office development imposed by Municipal Ordinance No. 240-80 (amending Section 126 of the City Planning Code), effective July 1, 1980 and extended to May 7, 1984 by Ordinance 401-83, development bonuses are not permitted for office use; bonuses for residential and hotel use may be permitted by Conditional Use authorization. Any proposed developments in the Downtown Interim Special Review Area may be subject to Discretionary Review by the City Planning Commission (Resolution 8474, January 17, 1980) before approval of a building permit.



C CHURCH
O OFFICE/THEATER
V VACANT
..... SURVEY AREA BOUNDARY

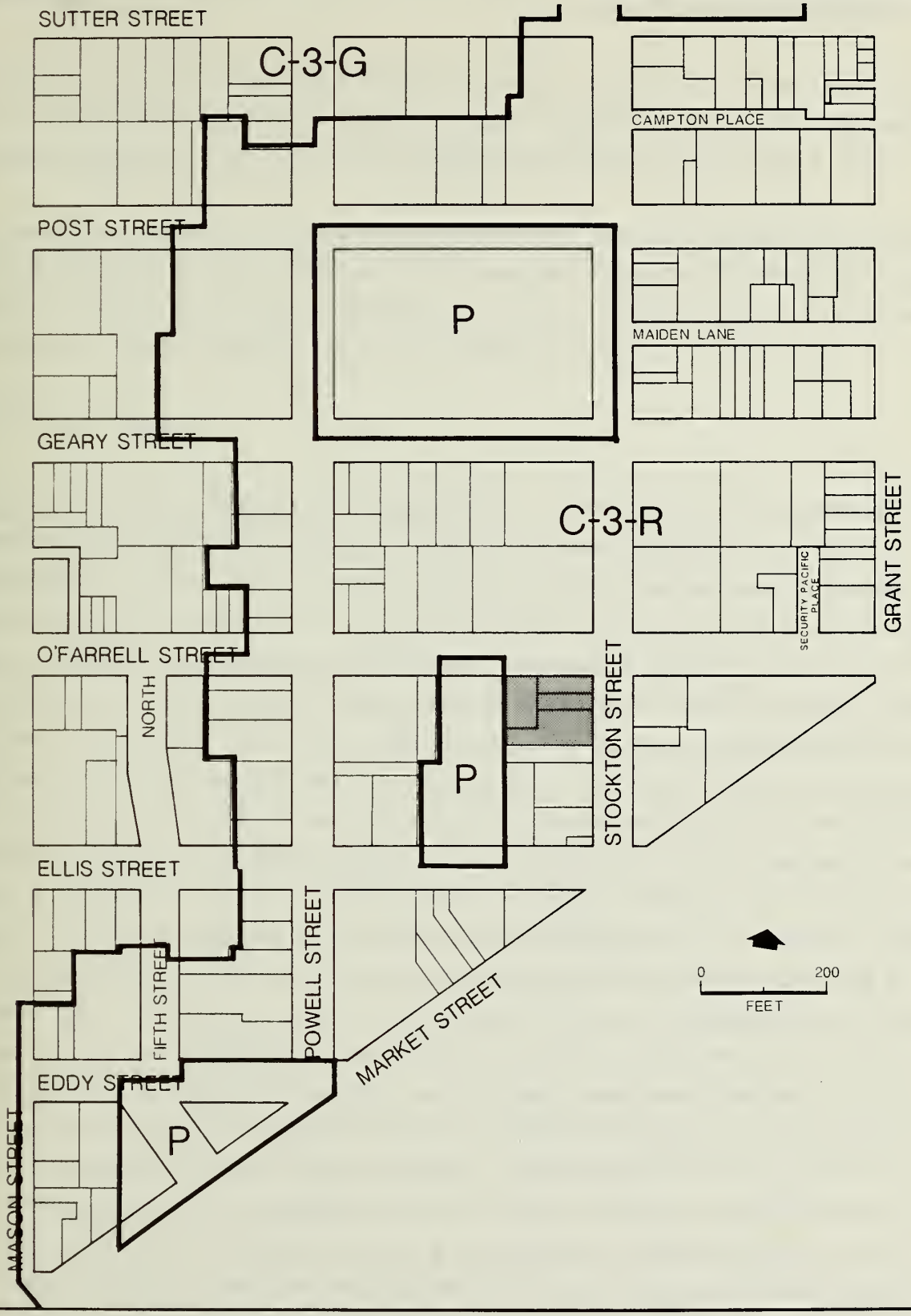
HOTEL/RETAIL
OFFICE
RETAIL/OFFICE
RETAIL

RESIDENTIAL/RETAIL
HOTEL
PARKING
PUBLIC PARK/PLAZA

PROJECT SITE

FIGURE 9:
LOCAL LAND USES

SOURCE:
Environmental Science Associates, Inc.



PROJECT SITE

P PUBLIC USE DISTRICT

C-3-R DOWNTOWN RETAIL DISTRICT

C-3-G DOWNTOWN GENERAL COMMERICAL DISTRICT

FIGURE 10:
CITY PLANNING CODE USE DISTRICTS

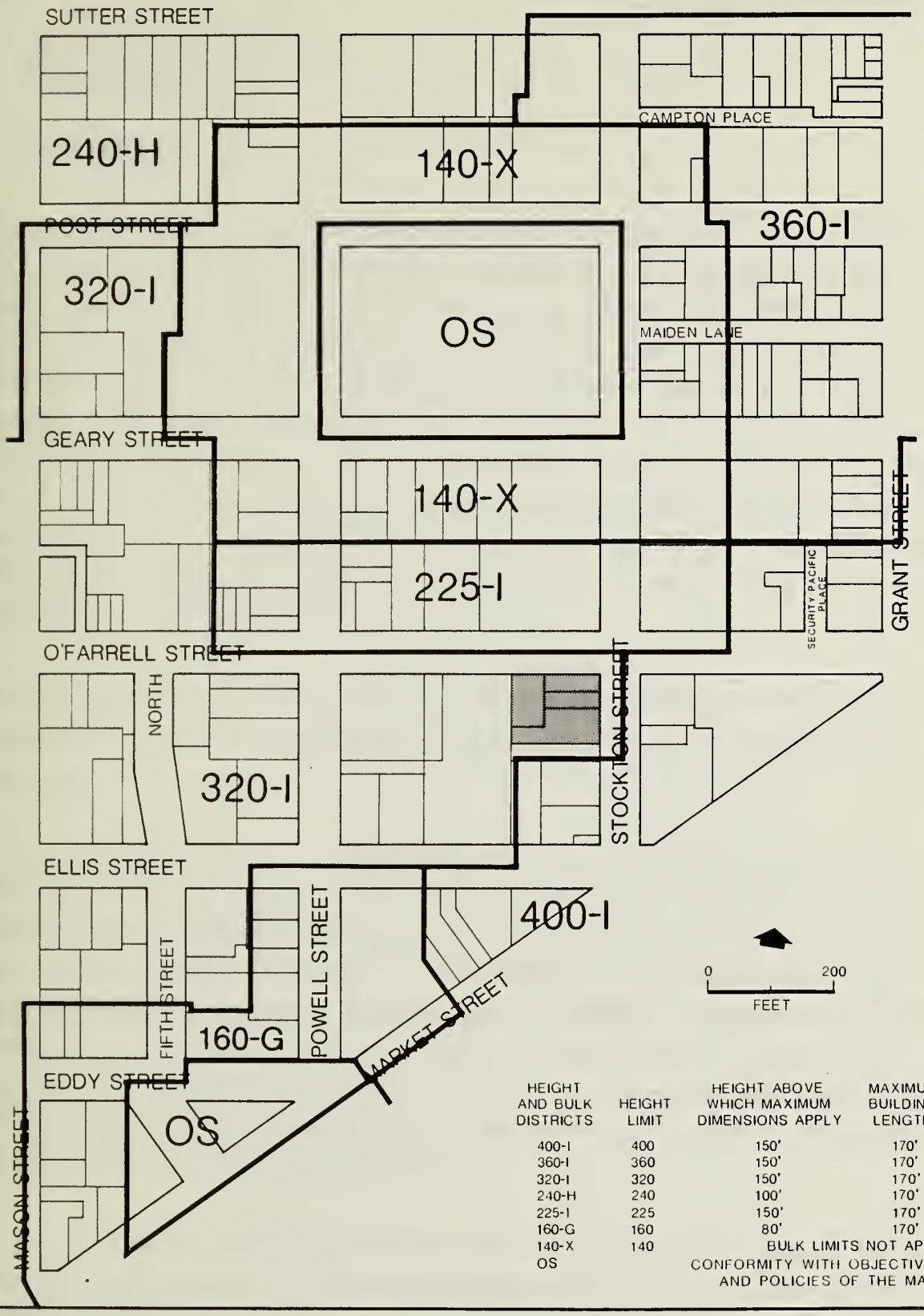
SOURCE:
San Francisco City Planning Code

The site is in a 320-I Height and Bulk District, with a maximum permitted height of 320 ft. (see Figure 11). Above a height of 150 ft., the maximum permitted horizontal diagonal dimension is 200 ft., and the maximum permitted building length is 170 ft.

The objectives of the project would be consistent with Article 2, Section 210.3 of the City Planning Code which states that the C-3-R Downtown Retail District should be a regional center for comparison shopper retailing and and direct consumer services (for further discussion of Master Plan policies, refer to Appendix A, p. A-1).

DOWNTOWN PLAN

The Downtown Plan, Proposal for Citizen Review, published by the Department of City Planning in August 1983, establishes a comprehensive set of guidelines for future development in the downtown. Under the Downtown Plan, the maximum allowable FAR for the project site would be 6:1. It would be located within a 80-130-F Height and Bulk District (additional height above 80 ft. up to a maximum of 130 ft. would only be granted as conditional use if the project would not shade sidewalks or other open spaces, would provide an appropriate transition to adjacent higher or lower buildings and would preserve the continuity of the predominant streetwall height of the block.) New development in the proposed 80-130-F Height and Bulk District, including the project site, would also be subject to maximum plan dimensions of 110 ft. in length and 140 ft. in diagonal dimension above a building height of 80 ft. Sidewalks on both sides of Stockton St. and the north side of O'Farrell St. adjacent to the project site are designated for "mandatory sunlight access" in the Downtown Plan. To preserve sunlight access to these areas during the critical times as defined on p. 100 of the Downtown Plan, new development on this site would have to have a maximum streetwall height of 66 ft. along O'Farrell St. and 65 ft. along Stockton St. The Downtown Plan would require usable public indoor or outdoor open space as part of new downtown development. In the C-3-R district, a 1:100 ratio of open space to building floor area would be required. The Downtown Plan would allow the open space requirement of new buildings to be met through a variety of open space types, such as urban gardens, parks, plazas, terraces, greenhouses and snippets, either on- or off-site. The Downtown Plan's objectives and policies for the retail area are to "improve downtown San Francisco's position as the region's prime location for specialized retail trade," and to "maintain high quality, specialty retail shopping facilities in the retail core."



HEIGHT AND BULK DISTRICTS	HEIGHT LIMIT	HEIGHT ABOVE WHICH MAXIMUM DIMENSIONS APPLY	MAXIMUM BUILDING LENGTH	MAXIMUM DIAGONAL DIMENSION
400-I	400	150'	170'	200'
360-I	360	150'	170'	200'
320-I	320	150'	170'	200'
240-H	240	100'	170'	200'
225-I	225	150'	170'	200'
160-G	160	80'	170'	200'
140-X	140	BULK LIMITS NOT APPLICABLE		
OS		CONFORMITY WITH OBJECTIVES, PRINCIPLES AND POLICIES OF THE MASTER PLAN		

PROJECT SITE

FIGURE 11:
CITY PLANNING CODE
HEIGHT AND BULK DISTRICTS

SOURCE:
San Francisco City Planning Code

B. URBAN DESIGN

VISUAL ASPECTS

Located in the middle of the San Francisco Downtown Retail District, the project site is also located within the Downtown Plan's proposed Kearny-Market-Mason-Sutter Conservation District (see Section III. C. Architectural Resources, p. ***). This architecturally homogeneous area, bounded generally by Kearny, Market, Mason, Sutter and Bush Sts., consists largely of buildings erected between 1906 and 1910. They are of generally similar scale, color and style, and originated in the City Beautiful Movement of that era. Almost three-fourths of the buildings in this district are 80 ft. or less in height; many feature terra cotta facades with classically derived ornamentation. All buildings are built to lot lines. Of a total of 323 buildings in this district, only 71 are not rated by either the Foundation for San Francisco's Architectural Heritage ("Heritage") or by the Department of City Planning (DCP).

The major open spaces in the area are Union Square, one block north of the site, and the Hallidie Plaza at Fifth St. North and Market St., about two blocks southwest of the project site.

In the immediate vicinity of the project site, major department stores of between five and eight stories in height dominate the streetscape. The Macy's building and the Joseph Magnin's building to the north and east of the site, respectively, establish strong focal points along O'Farrell and Stockton Sts. These buildings have corresponding vertical three-part facade compositions. Window patterns consisting of rectangles and arches are a predominant visual feature in both buildings. The Liberty House building at the northeast corner of Stockton and O'Farrell Sts. continues the street-wall height of the adjacent department stores, but features a blank facade, which does not reflect the area's prevailing window structure and ornamentation.

The view west along O'Farrell St. includes buildings ranging from the 46-story Hilton Tower to several three-story commercial buildings. The majority of buildings are four- to eight-story brick commercial and hotel buildings, with the Macy's building and the Imperial Realty (Leeds) Building (65 Stockton St.) in the foreground (see Figure 12). Saint Mary's Church, on the top of Cathedral Hill, appears in the background of the observer's field of view.

The view east along O'Farrell St. includes buildings ranging from the 16-story Central Tower Highrise to five-story commercial buildings. This view is dominated by the five-story Joseph Magnin Building and the 10-story Phelan Building along the south side, and the Liberty House building on the north side of O'Farrell. (See Figure 13.)

The view south along Stockton St. from Union Square includes buildings ranging from the nine-story Pacific Building at 821 Market St. to several two-story commercial buildings along the western streetfront of Stockton St. The Neiman-Marcus and Liberty House (now Macy's) department stores define the eastern streetfront, while the eight-story I. Magnin and Macy's department stores line the western streetfront. Other buildings between two and four stories in height make up the remainder of the western streetfront of Stockton St. (See Figure 14.)

The view north along Stockton St. from Market St. includes buildings ranging from the 34-story Hyatt Union Square Tower to several two-story buildings along the west side of Stockton St. Most of this view corridor is defined by massive five- to eight-story department stores like Grodin's, Macy's and Liberty House (now Macy's). (See Figure 15.)

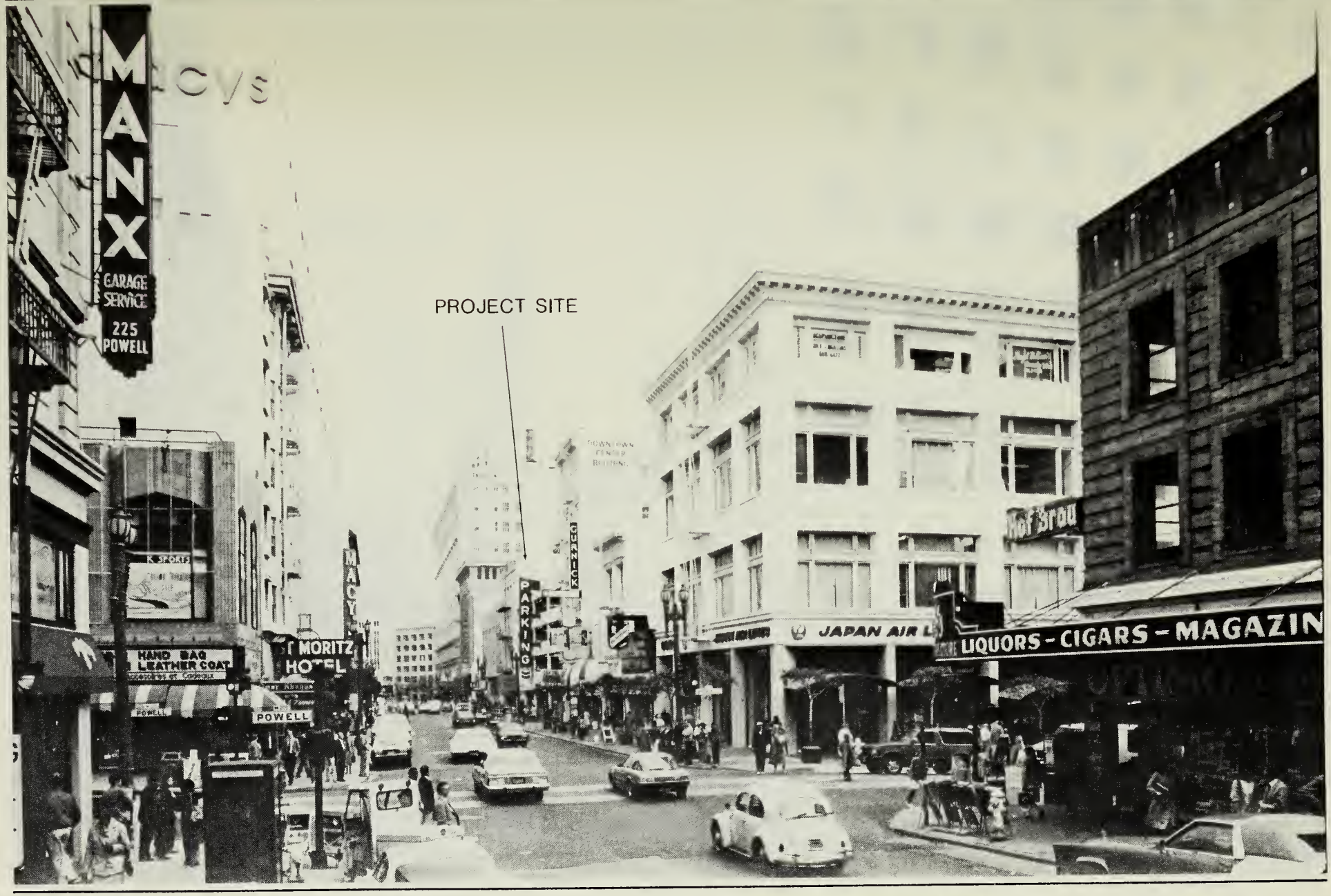
No long-range views of the San Francisco Bay or other parts of the City other than the Retail and Financial Districts are available from the existing buildings on the site. The project site is not visible from long-range view points to the west or the south (i.e., Twin Peaks or Potrero Hill), because of intervening high-rise structures. The existing on-site structures are generally not visible from locations beyond the buildings and streets in the immediate project vicinity.

C. SHADOWING AND SUNLIGHT ACCESS

The existing buildings on, and in the immediate vicinity of, the project site cast the following shadow patterns on the adjacent streets and sidewalks (see existing shadow patterns in Figures 20-31, in Section IV.B. Urban Design Impacts, pp. ***-***):

SOURCE:
Douglas Symes

FIGURE 12:
VIEW OF PROJECT SITE TOWARD WEST ALONG O'FARRELL STREET



SOURCE:
Douglas Symes

FIGURE 13:
VIEW OF PROJECT SITE TOWARD EAST ALONG O'FARRELL STREET

SOURCE:
Douglas Symes

FIGURE 14:
VIEW OF PROJECT SITE TOWARD SOUTH ALONG STOCKTON STREET FROM UNION SQUARE

SOURCE:
Douglas Symes

FIGURE 15:
VIEW OF PROJECT SITE TOWARD NORTH ALONG STOCKTON STREET FROM MARKET STREET

Mornings (10 a.m.). During spring and summer, existing buildings on the site shade about 160 ft. of the southern sidewalk along O'Farrell St. in front of the project site. No other sidewalk areas are shaded during these seasons. During the fall, existing buildings on the site shade about 180 ft. of the southern sidewalk along O'Farrell St. The low sun of winter causes existing site buildings to cast shadows across both sides of O'Farrell and Stockton Sts. along the entire project frontage.

Noon. During spring and summer, existing buildings shade the sidewalk fronting the project site along O'Farrell St. In the fall, existing buildings shade about 160 ft. of the same sidewalk along O'Farrell St. The winter sun casts shadows of existing buildings across sidewalks on both sides of O'Farrell St. along the project frontage, as well as on the western sidewalk adjacent to the project site on Stockton St. frontage.

Afternoons (3 p.m.). During spring and fall, existing buildings shade the adjacent sidewalks along both the O'Farrell and Stockton St. sides of the project site. The high summer sun causes existing buildings to shade only half of the sidewalk width adjacent to the O'Farrell St. project frontage. The entire sidewalk adjacent to the Stockton St. project frontage is shaded. In the winter months, existing buildings on the project site completely shade sidewalks on both sides of Stockton and O'Farrell Sts. along the site frontages.

The following sun access criteria for streets surrounding the project site are proposed in the urban form guidelines of the Downtown Plan: both sidewalks along Stockton St. and the northern side of O'Farrell St. are designated for mandatory sunlight access. The Plan stipulates sun access angles and maximum streetwall heights to ensure sunlight and specific streets at designated critical hours. The maximum allowable building streetwall height along the south side of O'Farrell St. is 66 ft., to ensure sunlight access along the northern side of O'Farrell St. from 11 a.m. to 1 p.m., March to September. Similarly, the maximum allowable streetwall height along the west side of Stockton St. is 65 ft. to ensure sunlight access along the eastern side of Stockton St. until 1 p.m. all year.

D. ARCHITECTURAL RESOURCES

PROJECT SITE

The project site contains four, two- to four-story structures built between 1906 and 1931 (see list below)./1/ Three of these buildings are rated by the Foundation for San Francisco's Architectural Heritage (Heritage) survey, in which buildings are rated on a scale from a low of "D" to a high of "A". The buildings at 107-111 O'Farrell St. and 55-59 Stockton St. are rated "C". The Imperial Realty (Leed's) Building, located at 65 Stockton St. and originally built in 1910, was altered in 1931 from its original design. It was rated "B" until July 1983, then changed to a "C**" rating. The change in the rating of the building occurred, along with several others, during Heritage's re-appraisal of the "Splendid Survivors" ratings, because alterations of the original building design were not found to be of the superior design quality required for a "B" rating. Heritage regularly updates its ratings as new information on buildings is received and/or buildings are altered. If the building were restored to its orginal 1910 condition, however, it would merit a "B" rating./2/ The relevant Heritage rating sheet is on file with the Office of Environmental Review, 450 McAllister St., Fourth Floor.

Buildings rated "B" are recognized by Heritage as having "major importance" in the San Francisco urban context. The Landmarks Preservation Advisory Board considers "A" and "B" rated buildings to have highest priority for City Landmarks status./3/ The "C"- and "C**"-rated buildings on the site are recognized by Heritage to be of contextual importance; these buildings "are distinguished by their scale, materials, compositional treatment, cornice or other features."/3/ Such buildings establish the setting for more important buildings and add visual diversity and architectural character to the downtown area. The Imperial Realty (Leed's) Building is on the Department of City Planning's List of Architecturally and/or Historically Significant Buildings in the Downtown. The City Planning Commission adopted this list by Resolution No. 8600 (May 29, 1980), with the statement that plans affecting buildings on the list merited special review by the Commission. The Imperial Realty Building was included on the list as a "B"-rated building; this rating has since been reduced to a "C**"./2/ (For a desription of surveys, list and rating systems, see Appendix B, p. A-**.) Architectural and historic resources on the site and in the project vicinity are mapped on Figure 16, p. **.

The "C"-rated 55-59 Stockton St. building was built in 1906, and is the oldest building on the site. The building is a small, three-story, two-part commercial block, constructed in brick, with Gothic ornamentation. The ground-level "Eppler's Bakery" has occupied the site since the late 1930's. (See Figure 12, p **)

The "C"-rated 107-111 O'Farrell St. building (1909) is a four-story brick structure which features a two-part vertical composition with differentiated end bays and Renaissance/Baroque ornamentation. (See Figure 12, p. **)

The "C**"-rated 65 Stockton St. building is a 1931 remodelling of a 1910 structure. The design of the earlier building is reflected in the two-part vertical composition of the present structure, which features a system of structural bays. Features of the earlier structure which were altered include: custom-designed aluminum spandrels with detailed patterns (replaced by plain panels); zig-zag edges on ground-level windows (replaced by rectangular windows); and a soft yellow color with gray and green highlights on the upper floors (replaced with gray). (See Figure 12, p. **.)

The unrated 41-51 Stockton St. building is a two-story building with a large expanse of glass on the ground floor.

THE DOWNTOWN PLAN

The Downtown Plan would establish four categories of architecturally significant buildings: Category I - Significant Building, retain essentially intact; Category II - Significant Building, retain, but allow modification; Category III - Contributory Building, encourage retention, but allow replacement, and Category IV - Contributory Building, encourage retention as part of conservation district, but allow replacement. Alterations or new development in Conservation Districts would be reviewed by the Department of City Planning to maintain the character of the district. Unused developable floor area on sites of buildings in all categories that are retained could be transferred to other sites in the same zoning district or to sites within the proposed C-3-0 (Special Development) district in the South of Market Area.

The 55 Stockton St., 65 Stockton St. (Imperial Realty) and the 107-111 O'Farrell St. buildings are classified in the Downtown Plan as Category IV buildings. Buildings in this category are defined by the Downtown Plan as "buildings with a contextual value to a

conservation district and buildings rated very good in architectural quality or in relation to the environment and located in a conservation district." The project site is in the Downtown Plan's proposed Kearny-Market-Mason-Sutter Conservation District. However, The Downtown Plan states also that "while preservation of contributory buildings is desirable and would be encouraged by allowing their owners to transfer unused development rights, their importance is not so great as to justify a requirement that they be retained."(p. 71 of the Downtown Plan.)

On February 3, 1984, the Board of Supervisors adopted interim controls (Ordinance No. 54-84) which prohibit (until August 25, 1984) approval of permit applications for demolition of buildings " . . . rated by the Foundation for San Francisco Architectural Heritage as 'A' or 'B', or rated 'C' if the 'C' rated buildings are located in a Conservation District proposed in the Downtown Plan unless, as to any such 'C' rated building, the City Planning Commission finds that the replacement building appropriately maintains the character of the district." Because the Imperial Realty Building (65 Stockton St.), the 55 Stockton St. building and the 107-111 O'Farrell St. building are all "C"-rated buildings in a proposed Conservation District, approval of demolition permits for these buildings would require such a finding by the City Planning Commission while the interim controls are in effect.

SITE VICINITY

The site vicinity contains buildings on the Department of City Planning's 1976 citywide architectural survey and/or rated by Heritage. The DCP survey includes buildings considered to be among the top 10% of San Francisco's architecture and ranks these buildings from a high "5" to a low "1" (see Appendix B, p. A-**). These buildings are listed in Table 2 and Figure 16, and are discussed below in order of proximity to the site.

Directly north of the site, across O'Farrell St., is the Macy's building (originally O'Connor-Moffatt building) built in 1928 and enlarged in 1948 by the renowned architect, Lewis Hobart. This building stands 134 ft. in height, and features a three-part vertical composition with terra cotta Gothic ornamentation. It is rated "B" by Heritage. Just west of the Macy's building is the "C"-rated six-story Saint Moritz Hotel. The northeast corner of O'Farrell and Powell Sts. is occupied by the two-story Omar Khayyams's building, which, according to Heritage, is one of the finest examples of of Moderne shop design in San Francisco. It is rated "A" by Heritage and "4" in the DCP Survey. Figure 16 shows the location of these structures.

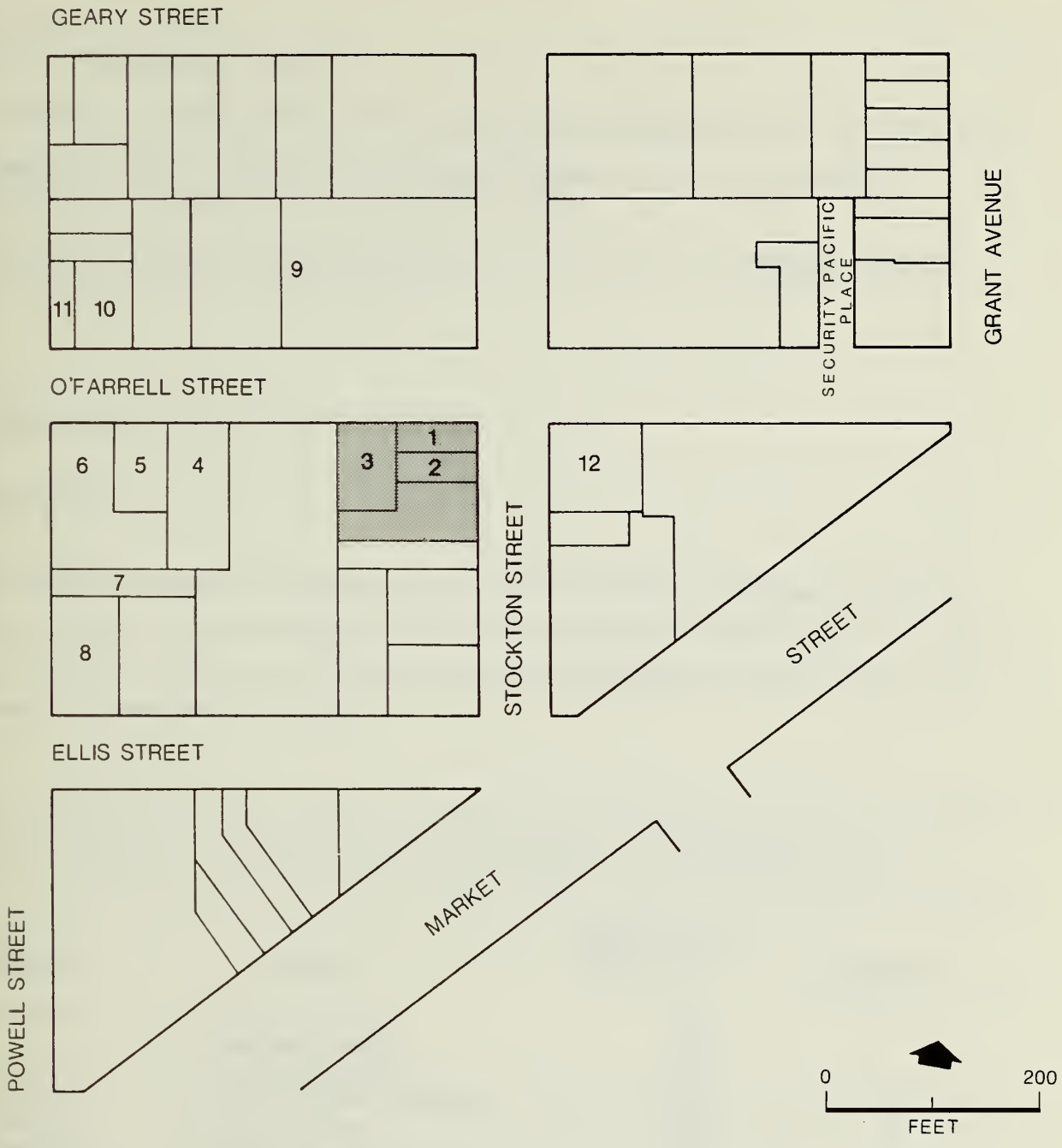
TABLE 2: ARCHITECTURALLY/HISTORICALLY RATED BUILDINGS IN THE VICINITY OF THE PROPOSED PROJECT

Number On Map	Assessor's Block/Lot No.	Address	Building	Heritage Rating	DCP Rating
1	327/1	65 Stockton	Imperial Realty	C**	NR*
2	327/2	55-59 Stockton		C	NR
3	327/20	107 O'Farrell		C	NR
4	327/18	165-167 O'Farrell	Downtown Center	C	NR
5	327/22	175-179 O'Farrell		C	NR
6	327/22	134-168 Powell	Elevated Shops	C	3
7	327/13	120 Powell		C	NR
8	327/12	100-118 Powell	Hotel Golden Gate	C	NR
9	314/2	101 O'Farrell	Macy's	B	NR
10	314/6	180-190 O'Farrell	St. Moritz	C	NR
11	314/7	200-216 Powell	Omar Khayyam's	A	4
12	328/4	46-68 Stockton	Joseph Magnin's	B	NR

* NR = Not Rated.
** Can be restored to original "B" condition.
NOTE: A building's name (in the Table and in the ratings) is the original historic name of the structures and may not coincide with the present building's name.

SOURCE: Foundation for San Francisco's Architectural Heritage Survey and the Department of City Planning's Survey. Compiled by Environmental Science Associates, Inc.

The project shares its O'Farrell St. block frontage with two "C"-rated buildings at 175-179 O'Farrell St. and 165-167 O'Farrell St. A third "C"-rated structure, the Elevated Shops building at Powell and O'Farrell Sts., is also rated "3" by the DCP Survey. Directly east of the project site is the Joseph Magnin (originally Newman and Lerinson) building. This structure, built in 1909 by Lansburgh and Joseph, mirrors the three-part composition of the near-by Macy's building and features minimal Gothic ornamental references in an otherwise uncluttered and light facade. It has been rated "B" by Heritage. The recently constructed Neiman-Marcus store, designed by Philip Johnson, occupies the corner of Geary and Stockton Sts. to the northeast of the site. The northeast corner of Stockton and O'Farrell Sts. is occupied by the unrated building, which formerly contained Liberty House.



			Heritage	DCP
1.	65 Stockton	Imperial Realty	B	-
2.	55-59 Stockton		C	-
3.	107 O'Farrell		C	-
4.	165-167 O'Farrell	Downtown Center	C	-
5.	175-179 O'Farrell		C	-
6.	134-168 Powell	Elevated Shops	C	3
7.	120 Powell		C	-
8.	100-118 Powell	Hotel Golden State	C	-
9.	101 O'Farrell	Macy's	B	-
10.	180-190 O'Farrell	St. Moritz	C	-
11.	200-216 Powell	Omar Khayyam's	A	4
12.	46-68 Stockton	Joseph Magnin's	B	-

NOTE:
A building's name (in the table and in the ratings) is the original historic name of the structure and may not coincide with the present building's name

SOURCE:
Foundation for San Francisco's Architectural Heritage Survey and the Department of City Planning's Survey. Compiled by Environmental Science Associates, Inc.

FIGURE 16: ARCHITECTURAL RESOURCES IN THE PROJECT VICINITY

NOTES - Architectural Resources

/1/ Raybern and Company, Inc., 1982, The San Francisco Realty Index, 1982-83 Edition.

/2/ Michael Corbett, Architectural Historians, Foundation for San Francisco's Architectural Heritage, letter dated March 21, 1984.

/3/ Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors, California Living Books, San Francisco, p.12.

E. EMPLOYMENT AND FISCAL FACTORS

EMPLOYMENT

The commercial space on the project site currently is leased to 10 tenants employing about 110 people. The distribution of tenants and employees is shown below in Table 3. Most employees on the site are retail clerks; other occupations include office workers, managers and maintenance workers.

TABLE 3: EXISTING TENANTS AND EMPLOYMENT AT THE PROJECT SITE

Address	Tenant	Space Leased (Sq. Ft.)	Employees
41 Stockton	House of Fabrics	3,781	5
	Shun Hing Office	950	2
	Merchandisers Co.	3,223	3
51 Stockton	Union Sq. Food Markets	6,807	14
55 Stockton	See's Candies	2,228	9
59 Stockton	Eppler's Bakery	2,310	5
65 Stockton	Leed's Shoe Store	9,500	20
107 O'Farrell	Livingston Bros.	17,550	50
113 O'Farrell	Lambros Coffee Shop	300	3
115 O'Farrell	Armen Jewelry Shop	300	2
TOTAL		46,949	113

SOURCE: Albert Tai, General Manager, Zaber Corp. N.V., letter dated November 2, 1983.

Retail Space

The site is within the major downtown retail shopping district surrounding Union Square in San Francisco. The area contains large department stores, such as Macy's, J. Magnin's, Liberty House (now Macy's), and Grodin's (see Figure 2, p. 14), adjacent to the project site, and smaller specialty retail establishments such as those on the project site. According to the Downtown Plan Draft EIR (Department of City Planning, March 1984), the C-3-R (Downtown Retail) District contained about 10.58 million sq. ft. of commercial space as of 1984 distributed as follows: 4.71 million sq. ft. of office, 3.44 million sq. ft. of retail, and 2.44 million sq. ft. of transient hotels. The Downtown Plan EIR forecasts that development in this area (including the northern part of YBC in the C-3-R District) will provide a net increase of 1.24 to 2.08 million sq. ft. of office space and 0.62 to 0.72 million sq. ft. of retail space by the year 2000./1/ This range of projections is based on the Downtown Plan and Alternative 1 development scenarios described in the Downtown Plan Draft EIR.

Office Space

San Francisco is the major office center in the Bay Area, with approximately 60.6 million gross sq. ft. of office space at the end of 1982./1a/ The C-3 district had 55.3 million sq. ft. of office space in 1981 and currently has about 62.1 million sq. ft. of office space in 1984./1b/ Historical data indicates that office space was added at average rates of 1.5 million sq. ft. per year during the 1970s and 2.4 million sq. ft. per year from 1980 through 1982./1a/

The projects under review, approved or under construction as of March 10, 1984 include projects in the greater downtown area outside of the C-3 District [see Appendix C-2, pp. A-1 to A-8 of this report]. An additional 5.5 million gross sq. ft. of net new office space will be added when the buildings under construction are finished, and another 4.8 million sq. ft. of net new office space has been approved but is not yet under construction. Another 8.7 million sq. ft. would be added if the projects under formal review, as of March 10, 1984, were eventually built. This total of about 19.0 million gross sq. ft. of net new office space (under formal review, approved, under construction, or completed but not fully occupied as of March 10, 1984) includes the 505 Montgomery St. project, listed as adding about 300,700 gross sq. ft. of net new office space. 'Net' includes additional space, subtracting existing space on sites being developed or proposed for development.

Office space projections in the Downtown Plan Draft EIR indicate the C-3 District would contain approximately 70.5 million gross sq. ft. of office space by 1990, and 78.9 million gross sq. ft. of office space by 2000./1c/ Alternatives analyzed for the Downtown Plan DEIR indicate net increasesk of office space in the downtown of approximately 1.4 million sq. ft. per year between 1984 and 1990 and a range of 0.7 million to 1.6 million sq. ft. per year between 1990 and 2000.

Vacancy Rates and Commercial Rents

On the basis of a 1982 citywide survey of 290 office buildings, the San Francisco Building Owners and Managers Association (BOMA) reported a citywide vacancy rate of six percent./2/ This rate is an increase over the 1.04% rate reported by BOMA in its 1981 survey and the 3.69% rate reported in an earlier 1982 survey. According to a March 1984 Coldwell Banker survey, the vacancy rate in downtown San Francisco office buildings (new, existing and major renovations) was 6.9%./3/ The 6.9% rate is an increase from 0.1% during June 1981 and 3.6% during September 1982 (earlier Coldwell Banker surveys). The current 6.9% vacancy rate is the third lowest of the 28 major downtown financial districts surveyed by Coldwell Banker. For comparison, as of December 1983 the office vacancy rate was 12.4% nationally; 11.3% in Chicago; 3.7% in downtown Manhattan; and 14.6% in Dallas./3/

Both surveys indicate a general increase in the vacancy rate for downtown San Francisco office buildings over the last three years. This increase may have been the result of several factors, including an increase in the amount of available office space (new space being completed and space available for sublease), a decrease in the demand for office space in relation to available supply, and the nationwide economic recession. Space nearing completion in new buildings may result in higher vacancy rates than existed in the late 1970s and early 1980s. However, according to Coldwell Banker, "Demand for prime office space in San Francisco's financial district remains strong as evidenced by healthy levels of preleasing activity in new buildings and a . . . vacancy rate considerably below the national average."/4/

The shift in the regional and national economies towards the service sector also has increased the demand for and stimulated the development of office space elsewhere in the Bay Area. Some businesses have moved their clerical, support, and production departments to outlying areas while maintaining headquarters and main branch offices in San Francisco. In particular, the City of Oakland, and San Mateo and Contra Costa Counties are experiencing increased demand for office space. As of January 1982, about 6.0 million square feet of office space in nine new buildings was proposed for construction in Oakland over the next 10 years,/5/ about 17 million square feet of office space is proposed or under construction along the U.S. 101 corridor in San Mateo County,/6/ and 15.8 million square feet of space is proposed or under construction in Contra Costa County./7/ These totals include projects in various stages of public review, not all of which may be approved or built.

As a result of the high demand in San Francisco and of increasing operating costs, land prices, construction costs, and interest rates, annual rents for office space in the downtown financial district have tripled in the last decade, from $8.50 per square feet in 1970 to approximately $30 per square feet in 1981./8/ New buildings are able to charge the highest rents, while rents in older buildings in the financial district are much less expensive, averaging between $10 and $15 per square feet. The rents for new office space in San Francisco ($25 to $42 per square feet) are about 45% higher than commercial rents in Oakland ($18 to $27 per square feet); the Peninsula ($18 to $24 per square feet); and Contra Costa County ($16 to $27 per square feet)./9/ Higher vacancy rates would be expected to decrease the pressure for higher commercial office rents in San Francisco. A rising vacancy rate could be beneficial to future lessees of office space by both lowering or stabilizing rents and increasing business choice for size, layout and location of office space.

FISCAL FACTORS

Property Tax Revenues

The assessed value of the project site for fiscal year 1983-84 was $7.4 million./10/ Under the fiscal year 1983-84 property tax rate of $1.15 per $100 of assessed value, the site generates about $85,100 in property tax revenues. The largest portion, about $64,700 or 87%, is distributed to the General Fund of the City and County of San Francisco; about $13,400 is allocated to the City's school districts and related funds; and about $5,000 to BART./11/

Other Taxes

The site also generates other taxes. In 1983-84, the General Fund revenues to the City and County of San Francisco from the site's sales, payroll, gross receipts, and utility taxes are estimated at about $87,200. The individual components of these tax revenues are discussed in Section IV., p. 73.

Costs and Net Revenues

The City incurs costs in serving the existing buildings. Police, fire and general government expenditures are supported primarily by the General Fund. Most street-maintenance, street-improvement, and traffic-control costs are supported by other

revenue sources such as fees, fines, and federal and state aid; such aid has been declining.

NOTES - Employment and Fiscal Factors

/1/ Department of City Planning, Downtown Plan Draft EIR, March 1984, Appendix G.

/1a/ San Francisco Department of City Planning, 'Major Office Building Construction in San Francisco Through 1982,' March 15, 1983.

/1b/ San Francisco Department of City Planning, Downtown Plan DEIR, EE.81.3, March 16, 1984, pp. IV.B.2 and IV.B.17.

/1c/ Downtown Plan DEIR, pp. IV.B.28 and IV.B.31.

/1d/ Downtown Plan DEIR, Appendices, pp. G.37-G.41."

/2/ Elmer Johnson, Building Owners and Managers Association, telephone conversation, December 22, 1982.

/3/ Coldwell Banker, "Office Vacancy Index of the United States," December 31, 1983. San Francisco vacancy rates are determined as part of a national survey of 28 major downtown districts conducted quarterly. A copy of the December 30, 1983 survey is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, Fifth Floor.

/4/ Coldwell Banker, "Office Vacancy Index of the United States," June 30, 1983.

/5/ City of Oakland, Department of City Planning, "Major Buildings in the Central District," January 26, 1982.

/6/ Blayney-Dyett, Urban and Regional Planners, "Proposed Specific Plan: Bayshore Office Park and Baylands Development Area, Brisbane, California," July 1982, and Metropolitan Transportation Commission, "Travel Impacts of Proposed Development on the Peninsula Along Route 101," September 9, 1982.

/7/ People For Open Space, "Proposed East Bay Office/Industrial Development," October 1982.

/8/ Department of City Planning Memorandum to the City Planning Commission, "South of Market Interim Controls," January 26, 1982.

/9/ Coldwell Banker, "The Commercial Real Estate Market in the San Francisco Bay Area," December 1982.

/10/ San Francisco Assessor's Office. The assessed value includes Assessor's Block 327, Lots 1, 2, 3 and 20.

/11/ Data from San Francisco Controller's Office; calculations by Environmental Science Associates, Inc.

F. TRANSPORTATION, CIRCULATION AND PARKING

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p. 12). Westbound on-ramps to Route 80, providing access to the San Francisco International Airport and the Peninsula, are located at Fourth and Harrison Sts. and at Seventh and Harrison Sts. Access to the East Bay via the Bay Bridge is provided by an on-ramp at Fifth and Bryant Sts.

The site is within the Downtown Core automobile control area designated in the Transportation Plan of the Transportation Element of the San Francisco Master Plan./1/ The Plan calls for reducing the impact of private commuter vehicles and excess automobile traffic in the Downtown Core, by not providing new parking within the core.

In the vicinity of the project site Stockton, O'Farrell, Geary, Ellis and Powell Sts. are designated in the Downtown Transportation Plan as transit preferential streets on which priority is given to transit vehicles over autos during business hours on weekdays./1/

Stockton St. is designated as a pedestrian-oriented street; the Downtown Transportation Plan calls for "improving mobility and rendering existing pedestrian space more pleasant" on pedestrian-oriented streets.

O'Farrell St. is one-way eastbound with three lanes of traffic between Powell and Stockton Sts. Stockton St. is one-way southbound and carries two lanes of traffic plus a diamond lane for buses only. The intersection of Stockton and O'Farrell Sts. is controlled by a fixed-time traffic signal.

The Stockton St. improvement plan in the Center City Pedestrian Circulation and Goods Movement Study/2/ recommends sidewalk and street improvements to Stockton St. between O'Farrell St. and Ellis St. These recommendations include:

- introducing pedestrian bulbs and clear zones to increase pedestrian capacity at street corners;
- widening the sidewalk on the west side of Stockton St. (fronting the project) from 15 ft. to 20 ft., 4 in.;
- relocating all news vending machines and mail boxes from the main streets to side streets, to increase effective sidewalk width;
- reducing the traffic lanes on Stockton St. from four narrow lanes to three adequate lanes (this would require reduction of commercial vehicle loading and on-street parking by one-half).

The first and fourth of these recommendations have already been implemented.

The site is served by BART and San Francisco Municipal Railway (Muni). Muni uses light rail vehicles, cable cars, electric trolley and motor coach lines to provide radial service

to and from the downtown area. Muni Metro (light rail vehicle lines) and BART are accessible via the adjacent Powell St. Station. Transit routes in the project vicinity are shown in Figure 32. Table 11, p. 91 in conjunction with Appendix Table D-1, p. 32, shows the existing p.m. peak-hour and p.m. peak period conditions on the Muni and other transit systems.

Regional transit service to the site is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Powell St. Station on Market St., and by AC Transit motor coaches at the Transbay Transit Terminal, located on Mission St. at First St.

Rail commuter service to the Peninsula is provided jointly by CalTrans and the Southern Pacific Transportation Company (SP) from a train terminal at Fourth and Townsend Sts. The San Mateo County Transit District (SamTrans) provides bus service to the peninsula from stops along various streets in the area, primarily on Mission St. BART also provides rail service directly to Daly City with transfers to SamTrans routes at the Daly City BART station. Independently owned and operated Jitneys provide service along the entire length of Mission St. (from The Embarcadero to Daly City) during a.m. and p.m. peak hours.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides bus service to Marin and Sonoma Counties. Boarding stops are along Howard St. and discharge stops are located along Folsom St. The closest stops to the project site are at Howard and Fourth Sts. (boarding) and Folsom and Fifth Sts. (discharge). Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry Building, about one mile east of the site.

Golden Gate Transit operates a van pool program to North Bay areas not served by existing motor coach routes. The RIDES car pool program operates as a nonprofit, publicly funded corporation, and provides consulting and matching services to help establish Bay Area carpools and vanpools.

Pedestrian activity around the site during the week day peak commute periods of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. is directed primarily to and from transit and parking facilities. Peak afternoon pedestrian flows are generally more intense than those of the morning period. Noon-hour flows are generally equivalent to or more intense than the afternoon flows, and are directed primarily to restaurants and retail stores. Weekday peak periods are generally heavier than week-end peak periods.

Weekend peak period pedestrian activity around the project site occurs during the late morning (between 11:00 a.m. and 12:00 p.m.) and during the mid-afternoon (between 2:30 p.m. and 3:30 p.m.) on Saturdays.

Sidewalk widths on O'Farrell and Stockton Sts. are restricted by newsstands, traffic poles and trashcans. The effective width of both the Stockton and O'Farrell Sts. sidewalks are 11 ft., about 75% of the full building-to-curb width of 15 ft.

Weekday pedestrian counts for the two sidewalks and two crosswalks fronting the project site were taken on November 15, 1983. The O'Farrell St. sidewalk along the project frontage currently operates during the weekday noon and p.m. peak hours, at the upper end of the unimpeded range. Table D-2, p. A-35 is a summary of pedestrian flow regimes (open, impeded, etc.).

The Stockton St. sidewalk along the project frontage currently operates near the upper end of the impeded range during both the weekday noon and p.m. peak hours.

Crosswalk flows across O'Farrell St. at the crosswalk closest to the project site currently operate at the lower end of constrained conditions during the noon peak and the upper end of impeded conditions during the p.m. peak. Existing pedestrian flows across Stockton St. at the crosswalk closest to the project site indicate operation at the lower end of the impeded range during both weekday noon and p.m. peak hours.

Saturday counts for the two sidewalks and two crosswalks fronting the project site were taken on March 24, 1984.

The O'Farrell St. sidewalk along the project frontage operates, during both the late-morning and mid-afternoon Saturday peaks, at the upper end of the unimpeded range. The Stockton St. sidewalk along the project frontage operates at the middle of the impeded range during both the late-morning and mid-afternoon Saturday peaks.

The O'Farrell St. crosswalk operates at the middle of the impeded range during both the late-morning peak and mid-afternoon peaks. The Stockton St. crosswalk operates at the upper end of the unimpeded range during both the late-morning and mid-afternoon Saturday peaks.

NOTES - Transportation, Circulation and Parking

/1/ San Francisco Department of City Planning, January 1983, Transportation, an Element of the Master Plan.

/2/ Wilbur Smith & Associates, 1980, Center City Pedestrian Circulation and Goods Movement Study, prepared for the San Francisco Transportation Policy Group, pp. 36-39.

G. AIR QUALITY

San Francisco's air quality, in general, is the least degraded of all the developed portions of the Bay Area. Because of the prevailing westerly and southwesterly winds, San Francisco is more a generator of its own air quality problems (especially carbon monoxide (CO) and total suspended particulates (TSP)) and a contributor to those problems in other parts of the Bay Area (especially ozone (0_3)), than a recipient of pollutants from elsewhere.

The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station about 2.5 miles south of the site at 900 23rd St. A three- year summary of the data collected, and the corresponding ambient air quality standards, are shown in Appendix F, p. A-**. These data show occasional excesses of the CO and TSP standards. In 1982, the eight-hour standard for CO was exceeded once and the 24-hour TSP standard exceeded three times. The one-hour CO standard was never exceeded. (A more-stringent one-hour CO standard went into effect January 15, 1983.) The only air pollutant to exceed standards in 1980 and 1981 was TSP; the 24-hour standard was exceeded six times in 1980 and once in 1981.

Highest annual pollutant concentrations in San Francisco, while exhibiting fluctuations due to variations in meteorology, have shown an overall improvement during the 1971-1982 period. No similar trend in the annual number of violations of standards is evident, although such occurrences are infrequent (six a year or fewer).

Emissions from motor vehicles are the largest source of CO, hydrocarbons (HC), TSP, and nitrogen oxides (NOx) in San Francisco, while power plant fuel combustion is the largest source of sulfur oxides (SOx)./1/

The nine-county San Francisco Bay Area air basin is designated by the California Air Resources Board (ARB) as a nonattainment area for O_3, CO and TSP. Nonattainment means the federal ambient air quality standards for these pollutants have been violated within the past two to three years. As required by the federal Clean Air Act Amendments of 1977, a regional Air Quality Plan has been adopted that establishes control strategies (stationary and mobile source emission controls and transportation improvements) to attain Federal and State standards for these pollutants by 1987./2/ The BAAQMD, Metropolitan Transportation Commission (MTC), and ARB have primary responsibility for implementing these strategies.

NOTES - Air Quality

/1/ California Air Resources Board (ARB), 1979, Emission Inventory 1976.

/2/ Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1982 Bay Area Air Quality Plan, December 1982.

H. ENERGY

Electricity and natural gas are provided to San Francisco by Pacific Gas and Electric Company (PG&E). New demand for electricity in northern California will be met primarily from coal, nuclear and hydroelectric services. Cogeneration, wind and geothermal power will also supplement existing supplies.

Among the major new power plants being built by PG&E are the Diablo Canyon nuclear power plant and the Helms Pumped Storage hydro-electric power plant. PG&E began cold-testing the Unit 1 of the Diablo Canyon plant at the end of September, 1983. Low power testing at the Diablo Canyon Facility at five percent of capacity was completed in March 1984. Build-up to full power output could begin in September 1984. Unit 2 is approximately ten months behind Unit 1; low power testing of Unit 2 is expected to begin April 1985./1/

PG&E has no operational nuclear power plants. It purchases power from Sacramento Municipal Utilities District's (SMUD's) Rancho Seco nuclear power plant. PG&E anticipates increased purchases of electricity from other utilities, primarily hydroelectric facilities in the Pacific Northwest, as available./2/ Increases in demand for power in the Pacific Northwest, cancellation of two of the five Washington Public Power Supply System (WPPSS) nuclear power plants and long-term delays in constructing two other WPPSS nuclear power plants, and fluctuations in available hydroelectric power because of climatic variation could affect supplies from the Pacific Northwest. The Helms Pumped Storage facility (three units, 400 megawatts each) is expected to be fully operational by mid 1984./2/ The Helms facility would add to reserve margins and would reduce the need for purchases of peak-period power from outside sources./4/

PG&E would be able to supply full electrical service to cumulative downtown development without operating the Diablo Canyon facility; however, PG&E maintains that projected costs would be higher and reserve margins would be lower than desired by the utility./1/ Extreme peak demands for electricity systemwide, if combined with forced generator outages, could eliminate reserve margins, necessitating purchases from other utilities or short-term 'brown-outs'.

The site is occupied by one- to four-story buildings containing retail and office; current energy consumption is unknown.

NOTES - Energy

/1/ Richard Davin, Nuclear Coordinator, Pacific Gas and Electric Company, telephone conversation, June 25, 1984.

/2/ Pacific Gas and Electric Company, April 1, 1982, "Summary of Energy Requirements and Resources", Publication No. R-2.

/3/ John Angus, News Service Representative, Pacific Gas and ELectric company telephone conversation, May 30, 1984.

/4/ Ronald R. Rutkowski, Public Relations Department, Pacific Gas and Electric Company, telephone conversations, August 26 and October 28, 1983.

IV. ENVIRONMENTAL IMPACT

On the basis of the Initial Study prepared on the project, published on January 13, 1984, the Department of City Planning, Office of Environmental Review, determined that an Environmental Impact Report was required. Issues determined to require further discussion as a result of the Initial Study include distant and near views of the project and its visual aspects; relationship of the proposed project to the appearance and scale of surrounding buildings; relationship of the project to the provisions and guidelines of the proposed Downtown Plan and the Comprehensive Plan's Urban Design Element; sun shading effects; transportation impacts; energy consumption and conservation; impacts an architectural and historical resources; employment and fiscal effects; and cumulative air quality impacts. (See Appendix A, p. A-**, for the text of the Initial Study.)

Some of the impacts in this section are not physical environmental effects as defined by the California Environmental Quality Act. They are included in the EIR for informational purposes only.

A. LAND USE AND ZONING

LAND USE

The proposed land uses for the site (retail, office, residential) would be consistent with those in the surrounding Downtown Retail district (see Figure 9, p. **). With the exception of the proposed penthouse units, proposed uses would also be similar to existing uses on the site in that they would be predominanately retail. However, existing uses are neighborhood-serving, while the project would be part of a regional center for comparison shopping, as the discussion below indicates. The project could therefore cause a loss of neighborhood-serving retail uses. However, the majority of the businesses on the site have expressed their desire to relocate into the proposed project, and are currently in negotiations with the project sponsor./1/

CITY PLANNING CODE CONFORMANCE

The proposed project would contain retail, office and commercial uses, which are principle permitted uses within the C-3-R (Downtown Retail) district. Its Floor Area Ratio (FAR) of 8.1:1 would be within the maximum allowable FAR of 10:1 for the site. The proposed project would be shorter than the maximum permitted height of 320 ft. for the project site. The project would thus conform with Section 209, Article 2.5, and Section 124 of the City Planning Code, governing uses, height, bulk and FAR.

The proposed project would respond to objectives of the San Francisco Comprehensive Plan and the City Planning Code description of C-3-R (Downtown Retail) as being a regional center for comparison shopper retailing and direct consumer services. The project's relation to the Urban Design Policies of the Master Plan has been discussed in the attached Initial Study, p. __.

THE DOWNTOWN PLAN

In August 1983, the Department of City Planning published The Downtown Plan, Proposal For Citizen Review (the Downtown Plan). The Downtown Plan contains proposals for comprehensive changes in controls of scale, intensity, and location of growth in downtown San Francisco; architectural preservation; open space; sunlight access; and transportation. The Downtown Plan will undergo public review, and possible modification, before final implementation of new Master plan and City Planning Code provisions by the City Planning Commission and the Board of Supervisors.

The relationship of the project to the major proposals of the Downtown Plan is discussed below. (See Section VII., Alternatives, p. ***, for discussion of project alternatives conforming with the Downtown Plan.) Table 4 provides a comparison of the project and the two Downtown Plan alternatives with the Downtown Plan.

The Downtown Plan proposes that the base FAR for the C-3-R Use District, including the project site, be changed from 10:1 to 6:1. Development greater than the basic 6:1 FAR would be allowed only through Transfer of Development Rights (TDR) from sites with unused potential floor area within the same zoning district. If all applicable TDR could be used for the project, it could be built to a FAR of 8.4:1. However, under Section 128 (c)(1) of the proposed code changes to implement the provisions of the proposed Downtown Plan, the project could not use any TDR, because it would include the demolition of three

TABLE 4: COMPARISON OF PROPOSED PROJECT WITH PROVISIONS OF THE DOWNTOWN PLAN

Major Development Controls Pertaining to Project Site	Current Controls	Proposed Project	Proposed Requirements in the Downtown Plan	Alternative 2 All Retail	Alternative 3 Preservation	Alternative 4 DTP-Conforming	Alternative 5 DTP-Conforming
Base FAR	10:1	8.1:1	6:1	8:1	7.8:1	5.92:1	8.42:1
Height Limit	320 ft.	125 ft.	80-130 ft./a/	120 ft.	106 ft.	97 ft./b/	130 ft./b/
Maximum Diagonal Length	200 ft.	176 ft.	140 ft. above 80 ft. in height	176 ft.	176 ft.	140 ft.	140 ft.
Incorporation of Art	Not Required	Art would be incorporated	Art equal to 1% of the Total Construction Cost	Art would be incorporated	Art would be incorporated	Art would be incorporated	Art would be incorporated
Ground-Floor Retail	Permitted	8,745 sq. ft. Proposed	Required	8,745 sq. ft. Proposed	8,945 sq. ft. Proposed	8,505 sq. ft. Proposed	8,505 sq. ft. Proposed
Sunlight Access	--	Would increase shadows on O'Farrell and Stockton St. sidewalks in spring and fall (see pp. __-__)	Criteria based on solar fan, height and bulk and time, duration and location of shadow. Critical times are from 11:00 a.m. March to September.	Same as Project	Would have shadow impacts somewhat less pronounced than proposed project	Would have no shadow impacts except on spring afternoons	Not available
Recreation/ Open Space	Not Required	1,600 sq. ft. sun terrace with restaurant seating.	1 sq. ft. for public use per 100 sq. ft. of gross floor area; 1,220 sq. ft. for project.	None	1,196 sq. ft.	895 sq. ft.	1,836 sq. ft.
Off-Street Office; Loading	2 spaces	2 spaces	0.21 spaces per 10,000 sq. ft. of gross floor area (to the closest whole number). 3 spaces required for project.	2 spaces	2 spaces	2 spaces	2 spaces
Long Term Parking	None Required	No Parking	Discourage new long-term parking in downtown.	No Parking	No Parking	No Parking	No Parking

/a/ Based on 80 - 130 ft. Height and Bulk Limits.
/b/ Would need Conditional Use Authorization to comply with DTP criteria

SOURCE: Kaplan/McLaughlin/Diaz; Environmental Science Associates, Inc.

buildings rated as contributory in the Downtown Plan on the project site. The sites from which development rights are transferred must have architecturally significant buildings or new parks or open space. The increased floor area on the site receiving TDR, however, may not exceed the height, bulk, and other controls of the Downtown Plan for that site.

The project's total gross floor area, 122,200 sq. ft. (8.1:1 FAR), would be about 31,450 sq. ft. greater than the 90,750 sq. ft. allowed under the base FAR in the Downtown Plan.

The project would fall within the height limits of the proposed 80-130-F Height and Bulk District, but would require a Conditional Use Authorization to exceed 80 ft. It would also require Conditional Use authorization to exceed the proposed maximum allowable plan dimensions of 110 ft. in length and 140 ft. in diagonal dimension (above a building height of 80 ft.) by 23 ft. and 35 ft., respectively. This authorization would only be granted as conditional use if the project, among other things, would not shade sidewalks or other open spaces, would provide an appropriate transition to adjacent higher or lower buildings and would preserve the continuity of the predominant streetwall height of the block.

The Downtown Plan would require usable public indoor or outdoor open space as part of new downtown development. In the C-3-R district, a 1:100 ratio of open space to building floor area would be required. The Downtown Plan would allow the open space requirement of new buildings to be met through a variety of open space types, such as urban gardens, parks, plazas, terraces, greenhouses and snippets, either on- or off-site. The project sponsor proposes to satisfy the open space requirement of the proposed plan through the provision of a sun terrace at the restaurant level. The Downtown Plan specifies that such a terrace should be at least 800 sq. ft. in size, should be on the second floor of the building or above, should be accessible directly from public corridors, should have one seating space for every 20 sq. ft. of terrace area, should receive sunlight from 11 a.m. and 2 p.m. between spring and fall equinox, should be sheltered from wind, and should be open to the public from 10 a.m. to 5 p.m. five days a week. The proposed 1,600-sq.-ft. sun terrace would fulfill the project's 1,220-sq.-ft. Downtown-Plan proposed open space requirement, as well as all other guidelines listed above. The proposed restaurant would use no more than 20% of the sun terrace open space.

NOTE - Land Use and Planning

/1/ Albert Tai, telephone communication, March 1984.

B. URBAN DESIGN

VISUAL ASPECTS

Table 5, below, contains a comparison of the project to the policies of the Urban Design Element of the Comprehensive Plan.

The proposed project would be located within the San Francisco Downtown Retail District, an area of architectural homogeneity, and one of San Francisco's main tourist attractions (see Section III. C., Architectural Resources, p. ***). The majority of buildings in the this District are about 80 ft. in height, and feature a mixture of Victorian, beaux arts and modernistic design styles typical of the 1906-1930 era. The core of the retail district, centered around Union Square and including the project site, is defined by newer buildings which generally exceed the average height and bulk of the typical Retail District architecture. These buildings include the Macy's, Liberty House, Joseph Magnin's, Neiman-Marcus, and Grodins department stores. The buildings currently on the project site are compatible with the general district characteristics.

The proposed project would have the following Retail Core design features. Its height (125 ft.) would mirror the building height of Macy's building directly across O'Farrell St. It would feature strong cornice lines and set-backs at the sixth and seventh levels, which would provide the project with an interesting building top, and would correspond to the building heights of neighboring buildings. The mid-section of the building, with its varied treatment of window openings, strong cornice definitions, understated classically derived facade detailing and abundance of glass, would show traditional design concepts similar to those apparent at the Macy's and Joseph Magnin buildings. The base of the building would consist largely of glass show-windows clad by semi-circular frames at the second level. This would provide pedestrian interest and relate to the base portions of neighboring structures. The pronounced entry articulation in the form of a rounded corner in the style of older department stores would be intended to mirror the prevailing height and bulk of neighboring

TABLE 5: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT

URBAN DESIGN POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
A. Policies for City Pattern	
1. Policy 1. "Recognize and protect major views in the City, with particular attention to those of open space and routes."	The project site is outside major designated view corridors. It would not obstruct views of Union Square to the Bay. It would not obstruct any views of major open spaces from the adjacent buildings.
2. Policy 2. "Recognize, protect and reinforce the existing street pattern, especially as it is related to topography."	The project would be built out to lot lines, except at the corner of Stockton and O'Farrell Sts., and would reinforce the overall scale of the Retail District gridiron street pattern.
3. Policy 3. "Recognize that buildings, when viewed together, produce a total effect that characterize the City and its districts."	The project would be of a similar scale, height and design as surrounding large commercial buildings. It would be designed to be consistent with the generally medium-scaled, light-colored and "City Beautiful" design character of the Union Square Area and reinforce its status as the City's prime retail comparison shopping area.
B. Policies for Conservation	
4. Policy 4. "Preserve notable landmarks and areas of historical, architectural or cultural value, and promote the preservation of other buildings and features that provide continuity with past development."	The project would demolish four buildings, one which is rated "C**", and two of which are rated "C" by Heritage. One building on the site is on the City's List of Historical and/or Architecturally Significant Buildings in the Downtown, although this was based on its previous "B" rating. All three Heritage-rated buildings are designated Category IV buildings in the proposed Downtown Plan.
5. Policy 6. "Respect the character of older development nearby in the design of new buildings."	The project would be similar in scale and height to the surrounding development. The design of the building facade is intended to mirror the major design elements and colors of neighboring development.

TABLE 5: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT

C. Policies for Major New Development	
6. Policy 1. "Promote harmony in the visual relationship and transition between new and older buildings."	See Response 2, 3, and 5 above. The project is intended to compliment older development in scale, style, color and height.
URBAN DESIGN POLICIES	
7. Policy 2. "Avoid extreme contrasts in color, shape and other characteristics which will raise new buildings to stand out in excess of their public importance."	The project would use light-colored pre-cast concrete similar in color to the cladding of the Joseph Magnin Building.
8. Policy 5. "Relate the height of buildings to important attributes of the City pattern and to the height and character of existing development."	The project height of 125 ft. would conform with the general height of the Retail District, and with the 134 ft. Macy's Building north of the site.
9. Policy 6. "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction."	See responses 3. and 5. above.

SOURCE: Urban Design Element, San Francisco Comprehensive Plan, 1971; Environmental Science Associates, Inc.

structures, thus providing an improved balance of building mass at the Stockton and O'Farrell Sts. intersection. The project would be clad in light-colored material such as pre-cast concrete or glass-fiber-reinforced concrete, reflecting the use of light-colored materials in almost all buildings in the project vicinity.

Views of the project as it would appear after completion are shown in Figures 17 - 19. The project would not obstruct any views of open spaces (Union Square or Hallidie Plaza) or of the San Francisco Bay from public areas.

C. SHADOWING AND SUNLIGHT ACCESS

The proposed project would at no time cast a shadow upon Union Square. It would cast the following shadow patterns on the adjacent streets and sidewalks (see Figures 20-23):

Mornings (10 a.m.). During spring and fall, the project would shade about 160 ft. along the northern sidewalk (across the street from the project) of O'Farrell St. between Stockton and Powell Sts. This shadow impact would be somewhat reduced by Macy's awnings. The high sun of summer would not create any new shading of sidewalks; a small amount of O'Farrell St. would be shaded along the project frontage. During the winter months, the project would not create any new shadows, since all adjacent streets and sidewalks would be already shaded by existing buildings.

Noon. During spring and fall, the project would shade about 130 ft. along the northern sidewalk of O'Farrell St. between Stockton and Powell Sts. The project would not contribute any new sidewalk shading during the summer; it would shade a small amount of O'Farrell St. During the winter, the project would shade a sliver of the sidewalk as well as some of the street along the western side of Stockton St., between Geary and O'Farrell Sts.

Afternoon (3 p.m.). During spring and fall, the project shadow would shade all of the Stockton/O'Farrell Sts. intersection that is not already shaded by existing structures. It would also shade about 50 ft. of the sidewalk to both sides of the intersection along the northern side of O'Farrell St., as well as along the eastern side of Stockton St. between Ellis and O'Farrell Sts. During the summer, the project would shade no additional sidewalk space; it would shade about 120 ft. of Stockton St. between Ellis and O'Farrell Sts. During the winter months, the project would not create any new shadows.

SOURCE:
Douglas Symes and
Architectural Models, Inc.

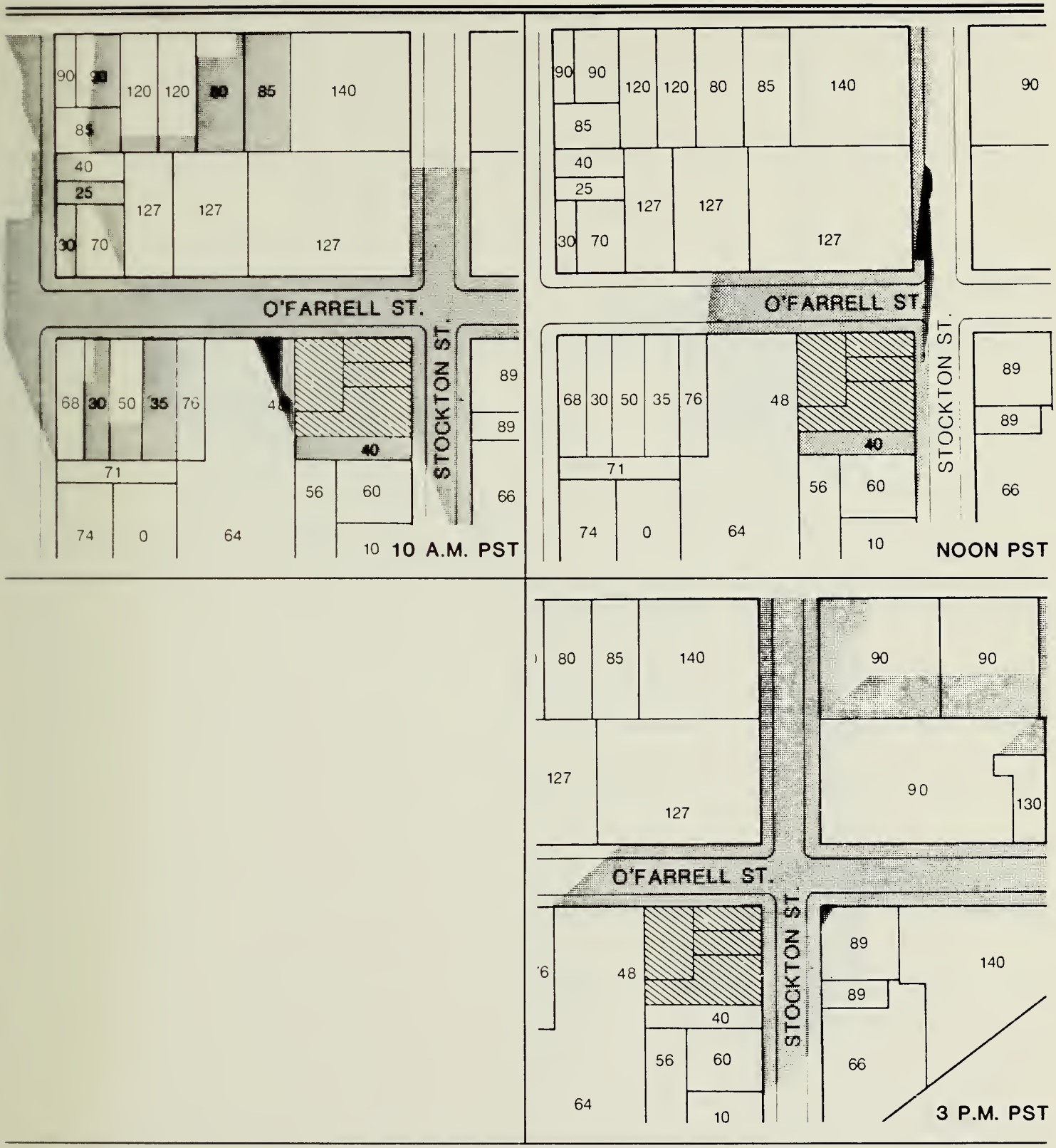
FIGURE 17:
VIEW OF PROPOSED PROJECT TOWARD WEST ALONG O'FARRELL STREET

SOURCE:
Douglas Symes and Architectural Models, Inc.

FIGURE 18:
PROPOSED PROJECT TOWARD SOUTH ALONG STOCKTON STREET FROM UNION SQUARE

SOURCE:
Douglas Symes and Architectural Models, Inc.

FIGURE 19:
VIEW OF PROPOSED PROJECT TOWARD NORTH ALONG STOCKTON STREET FROM MARKET STREET



SOURCE:
Environmental Science Associates, Inc.

FIGURE 20:
SHADOW PATTERNS IN PROJECT VICINITY
PROPOSED PROJECT, DECEMBER

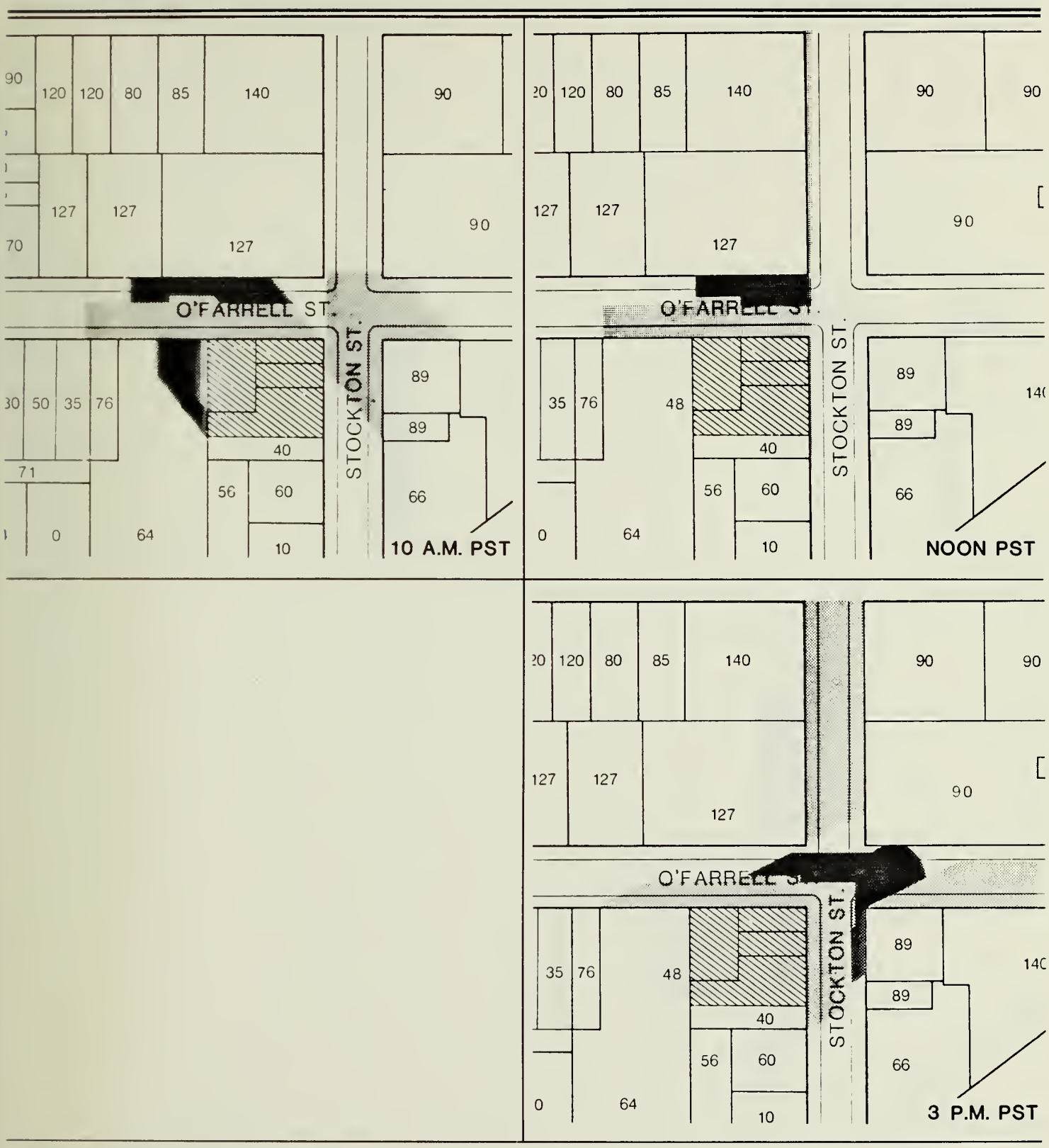
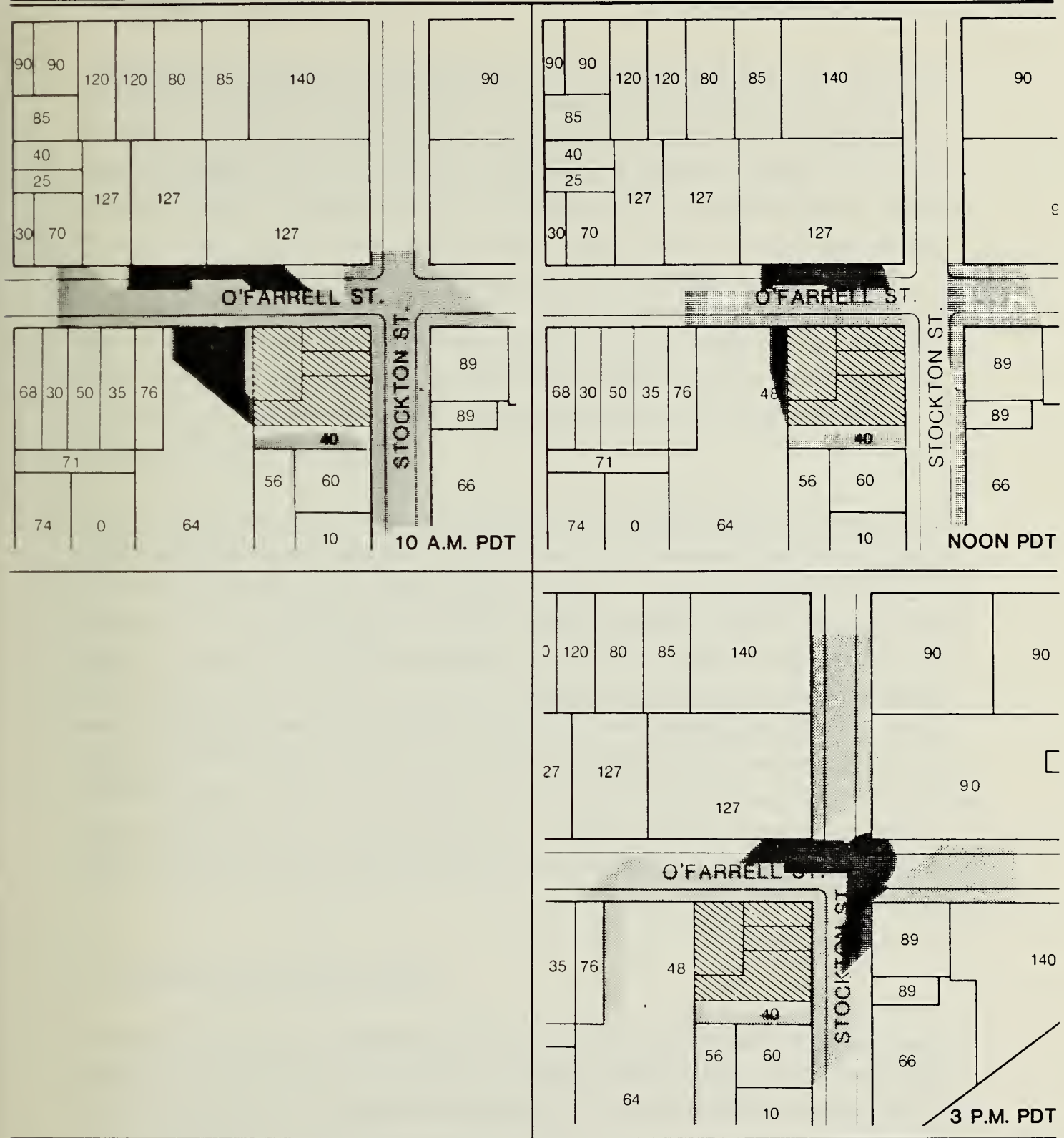


FIGURE 21:
SHADOW PATTERNS IN PROJECT VICINITY
PROPOSED PROJECT, MARCH

SOURCE:
Environmental Science Associates, Inc.

FIGURE 22:
SHADOW PATTERNS IN PROJECT VICINITY
PROPOSED PROJECT, JUNE

SOURCE:
Environmental Science Associates, Inc.



SOURCE:
Environmental Science Associates, Inc.

FIGURE 23:
SHADOW PATTERNS IN PROJECT VICINITY
PROPOSED PROJECT, SEPTEMBER

The project would exceed the following sun access criteria outlined in the urban form guidelines of the Downtown Plan: the 66 ft. allowable streetwall height along the southern side of O'Farrell St. would be exceeded by 31 ft.; and the 65 ft. allowable streetwall height along the west side of Stockton St. would be exceeded by 32 ft. The proposed mandatory sunlight access for the sidewalk along the northern side of O'Farrell St., which calls for unrestricted sunlight access from 11 a.m. to 1 p.m., March through September, would be exceeded after 11 a.m. during spring and fall. The proposed mandatory sunlight access for the sidewalk along the eastern side of Stockton St., which calls for unrestricted sunlight access from 11 a.m. to 1 p.m., would not be exceeded. There would be no new shadows on the west side of Stockton St. Exceptions to these limitations would be permitted under the proposed Downtown Plan only through Conditional Use authorization.

In order to compare project effects with those of a Downtown-Plan-conforming design, project alternatives were designed to conform with the Downtown Plan (see Section VII, pp. 135-141, Downtown Plan Conforming Alternative). Shadow diagrams included in the analysis of Alternative 4 (Figures 30-32, pp. 138-141) indicate that this design would not shade any sidewalks at the times indicated in the shadow analysis, except during spring afternoons (3 p.m.). At this time minimal shading of the sidewalks would occur along about 100 ft. of the east side of Stockton St. and a small portion (about 20 ft.) of this south side of O'Farrell St., east of the Stockton and O'Farrell Sts. intersection. With a streetwall height of 58 ft., this design would comply with all streetwall height regulations of the Downtown Plan. It would also generally conform with all mandatory sunlight access criteria outlined in the Downtown Plan for sidewalks in the project vicinity.

D. ARCHITECTURAL RESOURCES

The project would require demolition of three architecturally rated buildings on the site (see Figure 12, p. 32). The 65 Stockton St. building, (Imperial Realty or Leed's building) located on the corner of Stockton and O'Farrell Sts., was rated "B" by Heritage until July 1983. At that time, Heritage changed the rating to "C**", indicating that the building, although a "C" in its altered state, could be restored to a "B"./1/ The buildings at 55-59 Stockton St. and 107-111 O'Farrell Sts. are rated "C" by Heritage. "B"-rated buildings are defined by Heritage as having major importance by virtue of architectural,

historical and environmental criteria. "C"-rated buildings are distinguished by their contextual importance, providing the setting for more important buildings and adding visual diversity and architectural character to the downtown area (see Section III.D., Environmental Setting, p. 37). (See Appendix B, p. A-22, for a more detailed discussion of architectural rating systems.)

It is the policy of the Urban Design Element of the City's Comprehensive Plan to "preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." The Imperial Realty Building is among those downtown structures which have been designated by City Planning Commission Resolution 8600 (List of Architecturally and/or Historically Significant Buildings in the Downtown) as warranting special concern for preservation in part or in whole. The Imperial Realty Building was placed on the list referenced by both Resolutions when it was rated "B". The rating has since been reduced to "C**"/1/; there are no other "C"-rated buildings on the list. City Planning Commission Resolution 9240 recommends denial of projects that propose to demolish such architecturally significant buildings (see Appendix B).

The height, bulk and design of these buildings are typical for the Retail District in general. They do not reflect the characteristics of larger department buildings in the immediate project vicinity (see Section III. D., Environmental Setting). The proposed project would feature a three-part design with strong cornice separation, varied architectural treatment of window openings, a pronounced base consisting almost entirely of glass, and traditional facade detailing. It is the intent of the sponsor and project architect to design a new development which would complement the urban design character of the project site and its vicinity.

Buildings with an identified contextual value would be demolished by the project. The Board of Supervisors approved Ordinance No. 54-84 on February 3, 1984, which would prohibit approval of certain permit applications until August 25, 1984. Specifically, the ordinance prohibits demolition of "C"-rated buildings in proposed conservation districts in the Downtown Plan unless the City Planning Commission finds that the proposed project appropriately maintains the character of the district. The project site is in the proposed Kearny-Market-Mason-Sutter Conservation District. Should the ordinnce be in effect (or identical controls recommended in the Downtown Plan be adopted) at the time the

project permit application is acted upon, approval of the project would require that the Commission make the above finding. This ordinance would apply to the proposed project because it requires the demolition of rated buildings; the ordinance does not otherwise apply to buildings with less than 50,000 gross sq. ft. of net new office space.

THE DOWNTOWN PLAN

The 55 Stockton St. building, the Imperial Realty Building (65 Stockton St.), and the 107-111 O'Farrell St. building are classified in the Downtown Plan as Category IV buildings (see Section III. D. Environmental Setting, p. 37). Buildings in this category are defined by the Downtown Plan as "buildings with a contextual value to a conservation district and buildings rated very good in architectural quality or in relation to the environment and located in a conservation district." Because of its location in the Downtown Plan's proposed Kearny-Market-Mason-Sutter Conservation District, the project would be subject to a special review to ensure maintenance of the character of the district if the proposed controls of the Downtown Plan are adopted. However, the Downtown Plan also states that "while preservation of contributory buildings is desirable and would be encouraged by allowing their owners to transfer unused development rights, this importance is not so great as to justify a requirement that they be retained. Therefore, demolition and replacement or substantial alteration of such buildings would be allowed."

Section 128 (c)(1) of the proposed Code changes to implement the proposed Downtown Plan would prohibit the transfer of development rights to a project which would include the demolition of a Category IV building. The proposed project would therefore be restricted to the maximum permitted FAR without TDR of 6:1.

The three buildings at 55 Stockton St., 65 Stockton St. and 107-111 O'Farrell St. represent design types characteristic of the Kearny-Market-Mason-Sutter Conservation District. The project would be designed to incorporate many of the same characteristics which typify older buildings in the area. The project would attempt to mirror the height, bulk and design styles of its direct neighbors more closely than do the existing buildings on the site.

NOTES - Architectural Resources

/1/ Michael Corbett, Architectural Historian, The Foundation for San Francisco's Architectural Heritage, letter dated March 21, 1984.

E. EMPLOYMENT AND FISCAL FACTORS

EMPLOYMENT

The project would displace ten existing on-site businesses that employ about 110 workers. All tenant leases expire by July 1986, or are on a month-to-month basis. Replies to a survey inquiring abut relocation plans were received from seven of the ten leasees. All of the tenants responding to the survey indicated they would relocate, preferably in the new building on the site.

The project would provide space for about 360 permanent full-time jobs. Although no tenants are secured at this time, prospective tenants are anticipated to consist mainly of small retail stores (although one large retail tenant is possible), professional businesses, and a quality restaurant. Because specific tenants are not known, the projected number of employees was derived on the assumption of an average number of sq. ft. per employee, by land use type (see Table 6).

The project would employ persons in the same categories as now on site, providing expanded employment opportunities for semi-skilled individuals, as well as expanded professional employment opportunities. The net increase in retail employment would be about 145; the net increase in office employment would be about 105 jobs.

Project construction would require about 78 person-years of construction labor. Construction employment would average about 62 persons over a 15-month construction period.

The project would add about 66,750 sq. ft. of commercial space (41,000 sq. ft. of retail and restaurant and 25,750 of office) to the C-3-R District. According to the Downtown Plan Draft EIR, this amount of space would represent about 5.7% to 6.6% of retail space and 1.2% to 2.1% of office space that is projected to be occupied in this area by the year 2000./1/

TABLE 6: PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE

Employment Type	Building Space (Gross Sq. Ft.)	Space Per Employee (Sq. Ft.)	Projected Number of Employees*
Retail and Restaurant	70,400	350**	200
Office	43,300	275**	160
TOTAL			360
Existing employment on site			113
NET TOTAL			247

* Projections are rounded to the nearest 10.
** Downtown EIR Consultant's Report, Environmental Science Associates, Inc., May 1983, p. IV.C.5.

SOURCE: Environmental Science Associates, Inc.

FISCAL FACTORS

Revenues

The proposed project, after occupancy in 1987, would generate about $600,900 in total property, payroll, sales, gross receipts and utility tax revenues to the City's General Fund, which would represent a net increase of about $449,000 over revenues generated to the General Fund from the existing site (see Table 7).

TABLE 7: PROJECTED NET GENERAL FUND REVENUES DIRECTLY ATTRIBUTABLE TO THE PROPOSED PROJECT (1984 dollars)

Tax Category	Tax Rates (1983-84)	Revenues* Existing Site	Revenues* Proposed Project	Revenues* Net Increase
Property Tax	76% of $1.15/$100 fair market value	$64,700	$349,700	$285,000
Payroll Tax**	1.5% of gross payroll expenditures	25,500	82,500	57,000
Gross Receipts Tax	0.3% of total rental income	1,400	9,200	7,800
Sales Tax**	1.25% of gross retail receipts	56,300	135,800	79,500
Utility Tax*	0.5% of gross expenditures	4,000	23,700	19,700
	TOTAL	$151,900	$600,900	$449,000

* Rounded to nearest $100.
** See Notes /3/-/8/ on p. *** for sources and assumptions used to derive payroll, gross receipts, sales and utility tax revenues.

SOURCE: Environmental Science Associates, Inc.

Assessed Valuation and Property Taxes

Based on replacement costs, the fair market value of the project would be about $40 million (in 1984 dollars)./2/ On the basis of the full assessed (or market) value, the project would generate a total of about $400,000 annually in nonbond property tax revenues (from the $1 per hundred dollars of assessed value). Projected nonbond property tax revenues of about $349,700 would accrue annually to the City's General Fund. This amount would represent a net increase of about $285,000 over existing ($64,700) nonbond property tax revenues to the City. The complete distribution of property tax revenues is shown in Table 8.

The building would also generate property tax revenues to be used to retire bond debts. The tax rate at which these revenues would be generated in 1987 would depend on the amount of principal and interest payments due in that year and the total assessed value of property in San Francisco. The rate in 1983-84 is $0.15 per hundred dollars of assessed value. If that were the rate in 1987, when the building would be occupied, bond payment revenues from the building would be about $60,000, a net increase of about $48,900 above existing 1983-84 bond retirement revenues of about $11,100. The complete distribution of bond and nonbond property tax revenues that would be generated by the proposed project is shown in Table 8, p. ***.

Payroll and Gross Receipts Taxes

Tenants of the proposed building would pay either the payroll or gross receipts tax, whichever is greater./3/ Payroll tax revenues from the project would be about $82,500, based on the following assumptions: 1) payment of a payroll tax by all tenants; 2) a 1984 average wage of about $25,000 for downtown office workers and $13,700 for retail and restaurant workers;/4/ and 3) the current payroll tax rate of 1.5%. The payroll tax ordinance exempts about 10% to 20% of the employees from the tax because banks, insurance companies, and owners of businesses with tax liabilities of less than $2,000 do not pay business taxes under the ordinance. The owners of the project would pay a 0.3% gross receipts tax on their rental income. The estimated total annual rental income for the project would be about $3.05 million (1984 dollars)./2/ Gross receipts tax revenues therefore would be about $9,200. Total on site payroll and gross receipt tax revenues would represent a net increase of about $64,800 annually from these sources (see Table 7, p. **).

The 1.5% payroll tax and 0.3% gross receipts tax are the rates established by Ordinances 118-80 and 119-80./5/ These rates could be increased in the future if the Board of Supervisors were to enact new ordinances./6/

Sales Tax

Sales tax revenues would be generated by employee expenditures and the project's retail space. On the basis of a rate of 1.25% of gross retail sales, estimated annual sales tax revenues accruing to the City from taxable expenditures by project employees for retail goods and by on-site retail sales would be about $135,800./7/ The project would generate about $79,500 more in sales taxes for the City than the existing uses on the site.

TABLE 8: PROJECTED DISTRIBUTION OF PROPERTY TAX REVENUES FROM THE PROJECT SITE, 1987 (1984 dollars)

Agency	Ad Valorem Tax Rate*	Percent*	Revenues**
City and County of San Francisco			
General Fund	0.874	76.0	$349,700
Open Space Acquisition	0.025	2.2	10,000
Bond Repayment	0.081	7.1	32,500
County Superintendent of Schools	0.001	0.1	400
S.F. Community College District	0.014	1.3	5,800
S.F. Unified School District			
General Purpose	0.077	6.7	30,800
Debt Service	0.008	0.7	3,100
Bay Area Air Quality Management District	0.002	0.2	800
BART			
General Fund	0.006	0.6	2,500
Debt Service	0.061	5.3	24,400
TOTAL	$1.15	100.0%	$460,000 *

* Rounded
** Based on the 1983-84 composite tax rate of $1.15 per $100 of assessed valuation and a projected assessed valuation of $40.0 million.

SOURCE: San Francisco Controller's Office; Zaber Corporation, N.V.; calculations by Environmental Science Associates, Inc.

Utility Taxes

General Fund revenues are generated to the City by utility taxes on water, gas, electricity and telephone. The existing site utility use is estimated to generate about $4,000 in revenue to the City. Estimates of utility use indicate that the project would generate about $23,700 annually from utility taxes (see Table 7, p.***)./8/ Net new utility tax revenue to the City would be about $19,700.

Total Revenues

General Fund revenues for the City and County of San Francisco from the project would total about $600,900, based on the tax rates and fees in effect in fiscal year 1983-84. General Fund revenues from the existing uses on the site totalled about $151,900 in 1983-84; the project would result in about a $449,000 net increase in General Fund revenues (see Table 7, p. 73). Estimated total and net revenues accruing to the General Fund from the project site are based on 1983-84 tax rates and business conditions. Total revenues could change if property tax distribution to the City and County were to change in future years; if payroll taxes were to change, as a result of changes in employees' salaries; if office and retail rents fluctuate, thereby affecting the gross receipts tax; if the State changes the allocation of sales taxes to cities or counties; or if costs for utilities change, particularly telephone costs, because they are the largest component of the total utility users' tax.

Costs

Muni

The estimated 1980-81 not marginal cost (or incremental deficit) for MUNI operations is $0.39./9/ The project would generate about 17,700 new peak-period rides per year, which would generate a cost deficit to MUNI of about $6,900./10/

The project would pay for this deficit through its contributions to the General Fund. In the 1983-84 budget, about 10% of General Fund revenues were allocated to MUNI. On the basis of the net new General Fund revenues that would be generated by the project, the contribution to Muni would be about $47,000 (1984 dollars) after project occupancy. On the basis of the marginal cost figures above, the project would more than offset its Muni deficit, through its revenue contribution to the General Fund. However, allocations of the general fund is at the discretion of the Board of Supervisors, therefore this would be money that could be spent on other City services in the future should the City start to operate on a deficit. This conclusion should be qualified because the Muni deficit-per-passenger-trip figure is based on 1981-82 data, and more recent data that would allow a more precise estimate of costs are not available.

Effective April 1, 1982, the Muni fare per ride was increased from $0.50 to $0.60. The increase was primarily to meet the fare box revenue requirements of Assembly Bill (AB) 1107. AB 1107 allows Muni to receive a portion of the one-half cent BART sales tax revenue for operating expenses, provided that at least one-third of Muni's annual operating cost is paid from fare box revenues.

On April 27, 1981, the San Francisco Board of Supervisors approved Ordinance 224-81 to assess new downtown commercial development to support Muni./11/ The plan called for levying a one-time fee of up to $5.00 per gross square feet upon construction of new downtown office space. The ordinance, currently in litigation, would contribute funds for operating costs and capital improvements for Muni transit services. If the one-time fee is upheld, the project could generate up to about $216,500 in one-time fee revenues to Muni. This fee would cover the marginal costs of increased peak-hour ridership for the project for approximately 40 years.

The San Francisco Municipal Railway Short-Range Transit Plan, 1983-88, was published by the Public Utilities Commission on July 15, 1983. This plan outlines capital improvements that will be necessary to meet increased demand for Muni services, and associated projections of operating costs and revenues.

Proposed capital improvements for fiscal years 1984-88 indicate that in the first year of the Plan, capital expenditures would be about $90 million. According to the Plan, Tables 60 and 61, these improvments "can be reasonably achieved" because "up to $102 million could be available under optimistic funding scenarios. In the worst case, only a little over $55 million would be available," which would require deferral of some capital projects. "A shortfall would not significantly affect the scheduled implementation of the highest priority rehabilitation and replacement projects required for the effective delivery of existing and committed transit services."

Revenue projections for future years (beyond fiscal year 1983-84) are sensitive to funding decisions made by the state and federal governments. Projections in the Plan for these future years indicate inadequate funding levels for proposed capital improvements, because fare box revenues and federal subsidies will not cover expected capital improvement costs.

BART

In the 1982-83 fiscal year, the average net operating deficit per passenger trip for BART was about $1.09./12/ On the basis of a net increase of about 64,580 rides per year, the estimated annual BART deficit attributable to the project would be about $70,400./13/ (NOTE: The current estimate of 64,580 rides per year may change when new methodology is adopted. The question of appropriate methodology was unresolved at the time this was written.) The project would generate a total of about $67,600 in revenues to BART, including about $26,900 in property tax revenues, and about $40,700 from the 75% of the 0.5% transit sales tax allocated to BART. The project could result in an increase in revenues to BART of about $45,900. This amount does not include the remaining 25% of the 0.5% BART sales tax revenue distributed among BART, Muni and AC Transit by MTC. After subtraction of the net increase in BART's revenues from sales and property taxes that would be generated by the project, the net operating deficit of BART due to the project would be about $24,500.

For Fiscal Year (FY) 1981-82, BART attained a net operating surplus of $7.6 million. It received $67.3 million in financial assistance from property taxes, sales tax and state aid to its operating deficit. In 1981-82, BART used $2.6 million of this surplus to purchase capital equipment. The "BART 1982-87 Five-Year Plan" (adopted June 24, 1982) projects an overall operating surplus (after property tax, sales tax and other governmental assistance) of $60.4 million from FY 1982-83 to FY 1986-87. These funds will be applied to capital improvements by BART to meet cumulative transit needs of the region.

Cost and Net Revenues

Costs to San Francisco for providing municipal services to the proposed project are difficult to forecast. Most evidence indicates that overall costs per unit of service provided (per sq. ft. or per employee) to the new building would be lower than for existing buildings (see Appendix C, Table C-*, p.A-**, which identifies these fiscal impact studies and briefly discusses their findings). This reduction in per-square-foot costs is due primarily to improvements in fire and security protection systems in new construction. Costs for water and sewer service would be paid through user charges.

In general, existing public facilities, equipment, and labor are adequate to serve the project. While costs for servicing the site would increase because of the larger floor space and employment, costs per unit of service would not increase, and may actually decline.

Cumulative Fiscal Considerations

Net public costs of providing services to cumulative downtown development are difficult to quantify. Appendix Table C-3, p. A-30, discusses four approaches that have attempted to address the issue of net fiscal costs of downtown development.

According to three of the studies, downtown development could result in an initial fiscal benefit. Since revenues to the City would probably increase at a slower rate than costs, due to limitations on property tax increases resulting from the implementation of Proposition 13 (California Constitution Article XIII A), there could be a time when cumulative costs of providing services to currently proposed and approved development would be higher than revenues provided. This scenario would occur only if no new revenue sources were found, the rate of development declined, or proposed developments were not sold at some future date. The project would contribute less to this cumulative trend than most downtown developments, because it would contain retail space. Sales tax revenues would increase with inflation and would keep pace with the effects of inflation on municipal costs.

Cumulative Downtown Office Space

The proposed project, together with other major downtown office buildings under formal review (8.7 million net new sq. ft.), approved (4.8 million net new sq. ft.), and under construction (5.1 million net new sq. ft.) would add about 19.0 million gross sq. ft. of net new office space if all were to be built [see Appendix C-2, p. A-1 to A-8 of this report]. This list subtracts existing office space, on the sites of new buildings, that would be demolished. Of the 19.0 million sq. ft. of office space on the cumulative list, about 12.8 million is within the C-3 District.

Projections for alternatives in the Downtown Plan Draft EIR for the C-3 District indicate 70.5 million gross sq. ft. of office space in 1990 and between 77.5 and 86.5 million gross sq. ft. of office space in 2000, an increase of 14.4 to 24.4 million sq. ft. The Downtown Plan would result in an increase of 16.8 million sq. ft./14/ These projections considered land availability, location preferences, market conditions, and economic trends as independent variables, plus various zoning and planning policies of the Downtown Plan and the five alternatives analyzed in the Downtown Plan DEIR. The forecasts in the Downtown Plan DEIR are of space expected to be built and occupied in the C-3 District between 1984 and 2000.

The amounts of office space on the cumulative list and in these forecasts, although distinct from each other can be compared. The list contains about 12.8 million sq. ft. of office space in the C-3 District and the Downtown Plan DEIR indicates about 8.4 million sq. ft. of office space being added to the C-3 District between 1984 and 1990. The 12.8 million sq. ft. on the list would be expected to be absorbed in the mid 1990s.

Office space projections for all alternatives in the Downtown Plan DEIR for the year 2000 would exceed existing office space plus office space on the cumulative list, as the cumulative list cannot take into account projects not yet proposed. Office space on the cumulative list would be absorbed in the mid 1990s under all Downtown Plan DEIR alternatives. These comparisons are based on the assumption that all projects on the cumulative list would be built as proposed and projects not yet proposed (i.e., not on the cumulative list) would not be built before the years identified above. In addition, these comparisons are based only on projects on the cumulative list within the C-3 District.

NOTES - Employment and Fiscal Factors

/1/ Department of City Planning, Downtown Plan Draft EIR, March 1984, Appendix G.

/2/ Albert Tai, General Manager, Zaber Corporation, N.V., letter dated January 9, 1984.

/3/ Tax Collector's Office, Payroll Expense Tax and Business Tax Ordinances.

/4/ This assumption seems reasonable based on information contained in 466 Bush Street Final EIR, EE 81.175E, certified August 20, 1982, pp. 41-42 and the Downtown EIR Consultant's Report, Environmental Science Associates, Inc., May 1983, p. IV.C.15.

/5/ On August 5, 1982, the State Supreme Court ruled (City and County of San Francisco vs. Farrell) that increased payroll and gross receipts taxes adopted by the Board of Supervisors (Ordinances 118-80 and 119-80), but approved by fewer than two-thirds of the voters in San Francisco, are constitutional and do not violate California Constitution Article XIII A.

/6/ Burk Delventhal, Deputy City Attorney, telepnone conversation, September 7, 1982 and Diane Berry, Deputy City Attorney, telephone conversation, September 20, 1982.

/7/ Taxable expenditures within the central business district per office worker were $715 per year based on a $16,300 income in 1974 (San Francisco Planning and Urban Renewal Association (SPUR), Impact of Intensive High Rise Development in San Francisco, Detailed Findings, June 1975). The ratio of taxable expenditures to income was 0.0439 in the downtown.

/8/ Annual utility users' tax revenues were calculated as follows, with 1984 utility tax rates:

water:	507,300 cubic ft. per year x $0.00414 per cubic ft. x 5% tax = $100.
electricity:	3.876 million kWh per year x $0.07949 per kWh x 5% tax = $15,400.
gas:	7,200 therms x $0.556/therm x 5% tax = $200.
telephone:	113,700 gross sq. ft. of commercial space x $1.40 per sq. ft. x 5% tax = $8,000.
TOTAL:	$23,700

/9/ According to Bruce Bernhard, Muni Chief Accountant, telephone conversation, November 28, 1983, the average $0.39 deficit per peak-period ride is based on 1980-81 Muni budget figures of an additional cost per ride (marginal cost) of $0.71 and an average fare revenue per trip of $0.32.

/10/ Annual MUNI cost deficit calculated as peak-period rides per year X net marginal cost per peak period ride in downtown San Francisco.

/11/ Owners of property in the downtown area are challenging the legality of the Transit Impact Development Fee Ordinance by Action No. 79-0705 now pending in San Francisco Superior Court. Revenues from the ordinance are being collected but are not being spent for transit improvements until the legal status of the ordinance is resolved.

/12/ Ward Belding, Supervisor, Office of Research, BART, telephone conversation, November 7, 1983. The $1.09 average deficit per trip is based on all operating costs and

revenues for the entire system and is not specific to San Francisco trips. Available data from BART do not enable peak and non-peak-period costs to be differentiated.

/13/ 64,580 BART trips per year x $1.09 = $70,400.

/14/ Department of City Planning, Downtown Plan Draft EIR, EE 81.3, March 16, 1984, pp. IV.B.17-IV.B.31 and Appendix G, pp. G.37-G.41.

F. TRANSPORTATION, CIRCULATION AND PARKING

DEMOLITION, EXCAVATION, AND CONSTRUCTION TRAFFIC/1/

During the estimated 15-month construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and construction activity. Demolition activity would require four weeks and excavation would require an additional 22 weeks. A maximum of 24 round-trip truck movements per day would occur during these two periods. These trips would occur between 9:00 a.m. and 4:00 p.m., so as not to conflict with peak-period traffic. Trucks would use O'Farrell St. to Fourth St. to the freeway on-ramp at Fourth and Harrison Sts. to haul debris to a disposal site in South San Francisco.

Construction activities (steel erection and finishing) would generate an average of ten round-trip truck movements per day to the site during the entire 13-month period. Deliveries of materials would be distributed over the work day. Construction truck access to the site is proposed from O'Farrell St. During the entire 15-month construction period, the curb lane on O'Farrell St. would be closed for truck loading of materials during non-peak hours. This would reduce the capacity of O'Farrell St. This reduction of traffic capacity could be mitigated by the designation of the northern O'Farrell St. curb lane as a no stopping zone (see Section V, p. 126). Materials would be unloaded by crane and set directly into their final installed position or stored on completed floor decks. A covered pedestrian walkway would be built on the O'Farrell St. sidewalk, and would remain there for the duration of construction period. Stockton St. and the Stockton St. sidewalk would not be affected during the construction period.

Temporary parking demand by construction workers' vehicles, and impacts on local intersections from construction worker traffic, would occur in proportion to the number of construction workers who would use automobiles. These impacts would be expected to be lower than the parking impacts of project operation, as stated below.

The impact of construction truck traffic would be a slight lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of trucks. Truck traffic would be limited between 9 a.m. and 4 p.m.; however, should there be any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m., it would coincide with peak-hour traffic, particularly at freeway access points. Lane blockage on O'Farrell St. by queued trucks would reduce the capacity of this street and create additional delays on Muni's 38 and 38L lines which use this street. Blockage during times of peak traffic flow would have greater potential to create conflicts than during non-peak hours because of the greater peak-hour interaction between vehicles in adjacent lanes and vehicles moving around the queued trucks.

TRAVEL DEMAND ANALYSIS

Project Travel Demand

On the basis of land use, the project would generate about 2,004 net new person trips-ends (pte) per day./2,3/ These figures include trips made by auto, public transit, and other modes. Travel generated by existing office and retail uses on the project site has been subtracted from the total new travel to give the net new travel from the site. Shoppers in the Union Square area visit an average of four stores in each trip to the area; therefore, one out of four person trip-ends (pte) generated by the retail portion of the project has been considered as new travel to the downtown area./4/ Projected outbound p.m. peak-period and peak-hour trips by mode expected to be generated by the project are shown in Table 9. About 210 new outbound trips would occur during the p.m. peak-period due to the project, of which, about 132 would occur in the p.m. peak hour.

Modal assignments have been made on the basis of future modal splits for the year 2000 contained in the Draft EIR for The Downtown Plan (EE81.3). The future modal splits have been applied to the project travel for the purpose of comparing project travel with future travel demand on the transportation system serving San Francisco. The modal splits used were derived from aggregate data for the C-3 District, the zoning district that contains the project site, and thus represent an average condition. The actual modal split for travel from the project may vary from the C-3 District average. However, because the travel demand forecasts used to derive the average modal split data include the travel from the project, application of the average modal split data to project travel has been assumed to be sufficiently accurate for purposes of comparison.

TABLE 9: PROJECTED OUTBOUND TRAVEL DEMAND BY MODE FROM STOCKTON/O'FARRELL (pte/a/)

Travel Mode	P.M. Peak Period/b/	P.M. Peak Hour/b/
Drive Alone	23	14
Car/Vanpool	12	11
Muni	34	21
BART	26	17
AC Transit	5	3
SamTrans	1	1
SPRR	4	3
GGT Bus	5	3
Ferry	1	0
Walk Only	98	59
Other	1	0
TOTALS (rounded)	210	132

/a/ Person trip-ends.
/b/ The peak hour occurs during the two-hour peak period of 4:00-6:00 p.m.

SOURCE: Environmental Science Associates, Inc.

Cumulative Travel Demand

Analysis of the transportation impacts of cumulative development in San Francisco EIRs has been the subject of considerable public discussion. To date, cumulative analysis has been conducted on the basis of a list of proposed development in the greater downtown area (see Table C-2, Appendix C, for the March 10, 1984 list of these projects). The Downtown Plan Draft EIR presents a refinement of the existing process by using projections of employment growth, independent of a list of proposed projects, to project future travel./5/

As discussed in Appendix J of the Downtown Plan Draft EIR, planned transit service improvements have been assumed to be implemented by the year 2000. These planned improvements would allow system capacities to keep pace with demand increases over time. The Downtown Plan Draft EIR analysis also assumes that regional auto use will continue to change over time in response to the

increasing levels of congestion on the bridges and freeways serving the City. The analysis projects a shift from single-occupant auto use (drive alone) for commuting to ridesharing (carpool, vanpool), and to transit use.

The travel data presented in the Downtown Plan Draft EIR transportation sections (and in this report) are projections of total demand on the transportation system serving San Francisco. The projections are comprised of three components of travel demand. Two of the components were developed through an intricate travel modelling process for the C-3 District of San Francisco. These first two components of travel demand are C-3 District work (employee journey-to-work) travel and C-3 District non-work (all other) travel. The third component is non-C-3 District travel which was forecast through an analysis of regional trends adjusted for the effect of development in the C-3 District.

Although the C-3 District modelling process used analytical techniques common to travel forecasting, several portions of the process are unique to the C-3 District. The uniqueness is the result of the development of two major data bases - an inventory of existing land uses in the district and surveys of employees and employers in the district. The data developed from the surveys and the inventory have been used as the basis for forecasts of development and employment growth in the C-3 District. Sections IV.B, Land Use and Real Estate Development; IV.C, Business and Employment; IV.D., Residence Patterns and Housing; and Appendices G, Land Use and Real Estate Analysis; H, Business and Employment Analysis; and I, Theoretical Discussion of Housing Market Effects/Methodology for Forecasting Residence Patterns, of the Downtown Plan Draft EIR, which contain detailed information about methods used to project future employment in the C-3 District, are incorporated by reference into this report. The employment projections in the Downtown Plan Draft EIR for the year 2000 exceed the maximum employment projected using the current list-based cumulative analysis, as the list cannot take into account projects not yet proposed. The employment forecasts have been used as the basis for the travel demand modelling process. As described above, the C-3 District travel comprised two of the three components of total travel. Because of the use of the employment projections in the travel demand modelling process, the transportation forecasts for the year 2000 are independent of lists of cumulative development.

Through a complex calibration and validation process of comparing projections of travel demand modelled on the basis of the survey of C-3 District employees to actual travel from measurements made by state, city and regional agencies, work and non-work travel demand from the C-3 District was modelled for the years 1984, 1990 and 2000. The modelling process is comprised of the following steps:

- Trip generation rates (empirical measures of total travel to and from a specific land use) were applied to employment forecasts by business activity (i.e., different rates were used for various land uses).

- The total travel from the C-3 District was distributed to seven Bay Area zones on the basis of projections of future employee residence patterns and origin-destination patterns for non-work travel.

- Trips to each of the seven regional zones were assigned to travel modes on the basis of modal splits (distribution of travel over the transportation modes, auto, transit, etc.) developed from the C-3 District surveys.

At this stage of the process, the model forecasts total travel from the C-3 District. To complete the process and to allow analysis of the effect of travel demand from C-3 District development on the transportation network, the non-C-3 travel demand was analyzed. The total travel demand was calculated by summing C-3 District work and non-work travel and non-C-3 travel at sub-regional measuring points (called screenlines) located at or just beyond the San Francisco County Line (except for Muni and BART westbay service which were measured inside San Francisco, outside the downtown). The total travel demand was then compared to available service (capacity) at the screenlines and operating conditions (demand-to-capacity ratios) were analyzed assuming planned improvements. The results of those analyses are summarized later in this section.

For future years, the C-3 travel modelling process was modified to incorporate changes in travel patterns (modal split changes, different travel times), employee residence patterns and changes in land use patterns. The process incorporates the dynamic aspects of changing Bay Area travel patterns, rather than assuming a fixed, unchanging condition over time. An example of past changes in travel patterns can be seen in the amount of carpooling activity on the Bay Bridge. In 1977, peak average vehicle occupancy

westbound on the Bridge was 1.7 persons per vehicle. By 1983, in response to increasing congestion and increased travel and parking costs, peak average vehicle occupancy westbound increased to 2.1 persons per vehicle./6/ The non-C-3 travel demand was forecast through the use of growth factors developed on the basis of historic trends in regional and sub-regional travel./7/

The other process used to forecast cumulative transportation impacts starts with a list of cumulative office and retail development (net new office and retail space) proposed, approved or under construction in the greater downtown area. From that list, through the use of static employment densities for office and retail uses and established trip generation rates, forecasts of travel demand are made. The forecast travel is assigned to modes on the basis of static modal split factors (which are assumed not to change over time). The Transportation Guidelines for Environmental Impact Review: Transportation Impacts (Department of City Planning, September 1983, hereinafter Transportation Guidelines) describe the process and the data used to calculate transportation impacts from the list-based development.

The current list, shown in Table C-2, has about 19 million gross sq. ft. of net new office space and about 0.9 million gross sq. ft. of net new retail space. On the basis of the Transportation Guidelines analysis, the list-based development would generate approximately 80,000 p.m. peak-period person trip-ends, of which about 49,000 would occur in the p.m. peak hour. Table 10 shows a comparison of the projections of travel demand from the list-based analysis and from the Downtown Plan Draft EIR for the year 2000. While the list contains development both inside and outside the C-3 District, the Downtown Plan Draft EIR makes specific projections only for C-3 District development, and the travel components shown in Table 10 are for the C-3 District only; therefore, for purposes of comparison, travel from the C-3 component of the list (about 13 million gross sq. ft. of net new office space and 0.4 million gross sq. ft. of retail space) has been analyzed for comparison with the projections from the Downtown Plan Draft EIR for Alternatives 1 to 5 and the Downtown Plan. As shown in Table 10, p. __, travel demand from the Alternatives in the Downtown Plan Draft EIR ranges from Alternative 1 (about 17% higher than the Downtown Plan) to Alternative 4 (about 5% lower than the Plan). Although there is a range, the spread is within the level of accuracy of the transportation analaysis (± 10%), and thus, statistically, the transportation impacts of the Alternatives are equivalent to those of the Downtown Plan.

TABLE 10: COMPARISON OF LIST METHOD AND ECONOMIC FORECAST METHOD - OUTBOUND P.M. PEAK-HOUR CUMULATIVE TRAVEL DEMAND FOR THE C-3 DISTRICT (person trip ends)

Mode of Travel	3/10/84 List/a/	Downtown Plan (1984-2000)/b/	Alternative 1 (1984-2000)/b/	Alternative 2 (1984-2000)/b/	Alternative 3 (1984-2000)/b/	Alternative 4 (1984-2000)/b/	Alternative 5 (1984-2000)/b/
Work Person Trip-ends	22,100	41,400	47,600	46,200	44,400	39,100	39,700
Other Person Trip-ends	8,200	12,100	14,700	14,200	13,400	11,800	11,800
Total Person Trip-ends	30,300	53,500	62,500	60,500	57,900	51,000	51,600
Muni Northeast	900	1,600	1,700	1,600	1,600	1,700	1,700
Northwest	3,700	1,800	2,000	1,900	1,800	1,800	1,800
Southwest	3,100	1,100	1,100	1,000	900	800	800
Southeast	600	1,100	1,000	1,000	1,000	600	700
BART Transbay	4,500	11,800	13,300	13,100	12,700	11,300	11,300
Westbay	1,900	2,400	2,800	2,700	2,600	2,300	2,300
AC Transit	1,700	200	600	500	300	-100	-100
GGT Bus	1,100	3,200	3,700	3,600	3,500	2,700	3,100
Ferry	300	800	800	800	800	800	800
SamTrans	300	1,200	1,300	1,300	1,200	1,000	1,100
SPRR/CalTrain	500	1,800	2,000	1,900	1,800	1,700	1,700
Regional Auto/c/							
Golden Gate Bridge	370	410	630	590	540	390	370
Bay Bridge	960	1,250	1,550	1,540	1,510	1,060	1,110
Bayshore Freeway (U.S. 101)	420	470	650	620	590	400	400
Interstate 280	420	470	650	620	590	400	400

/a/ Travel from only those projects on the list that are located inside the C-3 District. The list also contains development located in the greater downtown area outside the C-3 District; travel from those projects has been included in the list-based travel shown in the remainder of this section.
/b/ Travel from the C-3 District only. The analysis used in the Downtown Plan Draft EIR assumes growth in regional travel that is not shown above; it is discussed in the remainder of this section.
/c/ Vehicle trip-ends; calculation made on the basis of 2.7 persons per carpool and 1.2 persons per vanpool. Person trip-ends on transit cannot be added to vehicle trip-ends to obtain total person trip-ends because of the varying numbers of persons per vehicle.

SOURCE: Environmental Science Associates, Inc.

Several anomalies are apparent in the data shown in Table 10. While the C-3 component of the list would generate about half as much travel as do the Downtown Plan and the five Alternatives, the list-based analysis yields projected travel demands within San Francisco (inside and outside the C-3 District) that exceed those generated by the Downtown Plan and the Alternatives.

The difference in total travel results in part from the different frames of the list and the Downtown Plan Draft EIR. The Downtown Plan Draft EIR established 1984 as the baseline year and 1990 and 2000 as target study years. Estimates of growth were made on the basis of projections for each of the target years for the range of alternatives. In contrast, the projects included on the cumulative list span a period from 1984 to sometime in the early or mid-1990's when completion of all projects on the list or a similar amount of square footage would be expected./8/ Thus, results of impact analyses using these two forecasting methods are not directly comparable.

The variations in travel by trip purpose (work, other) and by travel mode (as shown in Table 10) between the list-based method and the Downtown Plan Draft EIR method can be explained by differences in the methodologies and data bases used to forecast the travel demand. The list-based analysis employs single-use trip generation data to estimate total travel through the process of adding together the trip generation estimates from all the individual buildings on the list. These single-use trip generation rates do not incorporate any discounting factors to account for trips going from one building to another within the Downtown. Studies for the Downtown Plan Draft EIR have confirmed that there is considerable travel between land uses in the downtown area. Thus, the list-based analysis adds each trip as if it were a new trip in or out of the downtown.

The Downtown Plan Draft EIR travel demand model has refined the trip generation process by incorporating discounting factors that adjust the trip generation rates to give travel to and from the C-3 District as a whole; it does not include trips internal to the C-3 District. Thus, while the Downtown Plan Draft EIR process projects proportionately more work travel than does the list-based analysis, the Downtown Plan Draft EIR forecasts more closely resemble actual travel demand that would result from downtown development.

The differences in distribution of travel among modes (shown in Table 10) are the product of refinements in the regional distribution and modal split analyses in the Downtown Plan Draft EIR process. The list-based analysis assumes a static (unchanging over time) regional distribution and static modal splits. The Downtown Plan Draft EIR analysis has incorporated changes in both the regional trip distribution (reflecting projected availability of housing) and the modal splits (reflecting projected availability of roadway and transit capacity in the future).

The list-based analysis yields more San Francisco travel (as shown by larger Muni numbers for the list-based analysis in Table 10) than does the Downtown Plan Draft EIR analysis because the Downtown Plan Draft EIR analysis projects a declining availability of housing in the City. Thus, as the downtown work force increases, the percentage of workers living in San Francisco would decrease. The list-based analysis assumes that the percentage of workers living in San Francisco would remain constant over time and thus overestimates the numbers of future employees living in the City and underestimates the numbers of regional commuters.

Other differences in travel among the modes, particularly regional auto and AC Transit, are the result of the refined modal split process used in the Downtown Plan Draft EIR. As the list-based analysis assumes that modal split remains constant over time, the list-based analysis is insensitive to the abilities of transit agencies and regional roadway systems to serve future demand. The Downtown Plan Draft EIR analysis has assumed that the modal split would change over time in response to the increasing levels of congestion at the regional screenlines (described in the Downtown Plan Draft EIR). Thus, because the Bay Bridge is at or near capacity in the p.m. peak hour eastbound, the Downtown Plan Draft EIR modal split projects a proportionately lower increase in auto demand to the East Bay than does the list-based analysis. Similarly, for AC Transit the Downtown Plan Draft EIR recognizes that current regional transit policy dictates no increases in AC Transit transbay service and thus, the ability of AC Transit to carry additional riders transbay will be restricted in the future. Use of this changing modal split is a refinement that allows the travel model to more accurately forecast travel demand and thus, the Downtown Plan Draft EIR results represent a more accurate level of projection than has been possible using methods and data available to date.

Various other factors cause differences in the travel demand projections between the two approaches. The Downtown Plan Draft EIR and the Consultant's Report on Downtown Growth Management Alternatives (Environmental Science Associates, 1983) contain extensive discussion of the analyses and data used to forecast employment, land use (see sections cited above) and transportation demand (see Section IV.E and Appendix J).

TRANSIT

The transit agencies serving downtown San Francisco carry approximately 60% of the peak-period employee work travel, as well as about 20% of the peak-period other travel. (Figure _, p. _ shows Muni and BART routes in the project vicinity.) P.M. peak-hour and peak-period loadings on the local and regional transit routes were found to be near capacity for some of the routes in 1984 (see Table 11). The values shown in Table 11 are sums over the peak hour and the two-hour peak period. Within the peak hour, there would be periods of time when the loading ratios would be higher than those shown for the hour (peak-of-the-peak conditions). Individual transit vehicle loadings vary on a day to day basis because of fluctuations in ridership (demand) and because of variations in operating conditions caused by traffic congestion, equipment availability, and/or system breakdowns. Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix D, Figure D-1, pp. A-32 to A-34.

The level of service concept, similar to that developed for highway operations, has been applied to both bus and rail transit. Passengers per seat (i.e., total passengers divided by the number of seats) has been used as the measure of effectiveness to define the various level of service ranges. Table D-1, Appendix D, [p. A-31 of this report], shows the relationship between Level of Service and passengers-per-seat ratios for bus transit systems.

During the p.m. peak hour in 1984, all of the transit agencies were found to be operating in Level of Service D or better with the exception of BART Transbay where conditions were found to be at Level of Service F, and Muni in the Northwest and Southwest

TABLE 11: OUTBOUND REGIONAL TRANSIT DEMAND AND LEVEL OF SERVICE

Transit Agency	1984 Demand	1984 P/S/a/	1984 LOS/b/	DOWNTOWN PLAN (2000) Demand	DOWNTOWN PLAN (2000) P/S	DOWNTOWN PLAN (2000) LOS	DOWNTOWN PLAN (2000) Project Percent/c/	1984 + CUMULATIVE LIST Rounded Demand	1984 + CUMULATIVE LIST P/S	1984 + CUMULATIVE LIST LOS	1984 + CUMULATIVE LIST Project Percent/c/
P.M. Peak Hour											
Muni											
Northeast	7,100	1.16	D	8,800	1.05	D	0.07	8,700	1.04	D	0.07
Northwest	8,200	1.26	E	10,100	1.25	D	0.06	12,900	1.59	F	0.05
Southwest	13,500	1.45	E	16,600	1.42	E	0.04	17,500	1.50	E	0.03
Southeast	5,300	1.06	D	7,400	1.01	D	0.04	6,400	0.88	C	0.05
BART											
Transbay	16,100	1.53	F	27,900	1.42	E	0.07	21,900	1.12	D	0.05
Westbay	7,700	1.10	D	10,100	1.06	D	0.06	10,200	1.07	D	0.05
AC Transit	9,100	0.94	C	10,500	1.08	D	0.03	11,300	1.16	D	0.03
GGT Bus	5,300	1.00	C	8,500	0.91	C	0.06	6,800	0.73	B	0.04
GGT Ferry	800	0.57	B	1,500	0.38	A	0	1,100	0.28	A	0
Tiburon Ferry	200	0.40	A	300	0.60	B	0	200	0.40	A	0
SamTrans	1,900	1.12	D	3,100	1.19	D	0.05	2,300	0.88	C	0.04
CalTrain (SPRR)	3,100	0.61	B	4,900	0.79	C	0.01	3,800	0.61	B	0.08
P.M. Peak Period											
Muni											
Northeast	12,600	1.06	D	15,500	0.95	C	0.07	15,200	0.93	C	0.07
Northwest	13,100	1.13	D	15,300	1.05	D	0.05	20,600	1.41	E	0.04
Southwest	23,300	1.31	E	28,700	1.29	E	0.04	29,800	1.34	E	0.04
Southeast	9,100	1.00	C	12,100	0.88	C	0.03	11,000	0.80	C	0.04
BART											
Transbay	25,800	1.54	F	44,100	1.40	E	0.04	35,200	1.12	D	0.05
Westbay	11,300	0.80	C	14,600	0.77	C	0.05	15,400	0.81	C	0.05
AC Transit	14,000	0.95	C	17,000	1.16	D	0.03	17,500	1.19	D	0.03
GGT Bus	7,600	0.90	C	12,200	0.81	C	0.04	10,000	0.67	B	0.05
GGT Ferry	1,000	0.56	B	1,700	0.33	A	0.05	1,500	0.29	A	0.05
Tiburon Ferry	300	0.60	B	500	1.00	C	0.01	400	0.80	C	0.02
SamTrans	2,900	1.12	D	4,500	1.15	D	0.02	3,600	0.92	C	0.03
CalTrain (SPRR)	4,500	0.68	B	6,200	0.77	C	0.06	5,500	0.68	B	0.07

/a/ Passengers per Seat is the ratio of total demand to seated capacity.
/b/ Level Of Service is scale ranging from A to F that relates P/S ratios to passenger loading conditions on transit vehicles.
/c/ The percent of demand generated by the project.

SOURCE: Environmental Science Associates, Inc.

corridors where operations were found to be in Level of Service E. Although BART is a rail transit service, its cars have a unique seating configuration. The ratio of total capacity to seated capacity for a BART car (about 1.5) is equivalent to the ratio for bus transit and, thus the bus transit Level of Service scale is applicable to BART. Level of Service F ("crush" or "jammed" loadings) on BART is in the range of 1.5 to 1.8 passengers per seat. Because BART operates on a centrally-controlled system, the "crush" loadings would not increase passenger loading times (which causes deterioration of service) as would be the case on a bus transit system; rather, the effects of "crush" loadings on BART would be reflected in increased passenger discomfort.

The rail transit Level of Service scale is based on typical light rail transit systems for which total capacity is about 2.0 to 2.2 times seated capacity. The rail transit Level of Service scale would be applicable to Muni Metro. Muni Metro provides about 50% of the seated capacity to the Southwest corridor. Because Metro vehicles can accommodate higher loadings (a ratio of 2.0 passengers per seat) than buses or trolleys (a 1.5 ratio), the Level of Service would be somewhat better than shown in Table 11. An exact estimate of Metro loadings is not possible without analysis of the Metro service separate from the remainder of Muni service to the Southwest; such analysis would be beyond the ability of the travel demand analysis to accurately predict over time.

With regard to the Muni data presented in Table 11, the Muni routes have been aggregated on a corridor basis and thus include two-directional travel on some routes that serve the Northeast and Southeast corridors. The Muni numbers cannot be added over the corridors to get a total for the system. Neither can capacity be shifted from one corridor to another. For instance, capacity in the Northeast corridor depends, in large part, on capacity that serves the Southeast portion of the City. The 15, 19, 25, 30, 30X, 30AX, 30BX, 32, 41, 42, and 47 lines pass through the downtown in two directions. Service on the above lines is interdependent. Thus, increases or decreases in capacity on one of the above lines directly affect service in the opposite direction. Service to the Northeast and Northwest corridors are also interconnected as lines serving the Northwest must pass through the Northeast corridor and, thus, serve both areas. Muni ridership and capacity have been apportioned between both areas.

Passengers-per-seat ratios are only one measure of adequacy of service. The constraints of operating on heavily used streets in and around the downtown cause transit vehicle bunching, loss of running time and missed schedules, all of which reduce service, reliability, and ultimately, capacity. In some respects, this would not be evident from simple quantitative analysis. In addition to these inefficiencies inherent within the transportation system, there are other factors which would affect overall transit capacities. These include variability in daily and seasonal ridership for which an absolute capacity must be available, as well as transit riders who remain uncounted because their transit trips both start and end beyond the screenlines used in this analysis. Daily fluctuations in fleet availability also affect system capacity.

Further, policy considerations dictate operating conditions on certain lines where minimum headways have been established to maintain transit access to areas not warranted on the basis of ridership alone. When averaged together the ridership data from these lines may slightly distort overall ridership conditions.

P.M. peak-period conditions on transit in 1984 were found to be equivalent to or better than peak-hour conditions. In some cases, where demand remains at peak-hour levels during the two-hour period, the passengers-per-seat ratios in the two-hour period are higher than in the one-hour period. This anomaly is the result of transit agencies providing express (or additional) service during the peak hour but not during the entire peak period. An example of this type of operation may be seen on BART, where three extra trains operate in transbay service in the peak hour but not in the rest of the peak period. Another factor involved is the distribution of demand (ridership) at uniformly high levels over the peak-period.

Both transit demand and capacity have been assumed to increase during the period 1984 to 2000. The discussion of transit capacity increases for each agency are based on the Five-Year Plans and Capital Improvement Plans of the various transit agencies and are discussed in Appendix J of the Downtown Plan Draft EIR, pp. J.25-J.26; this material which is discussed below and summarized in Table 11 is incorporated by reference.

Future transit demand and loadings for the Downtown Plan in the year 2000 and for 1984 plus the Cumulative List are shown in Table 11 for both the peak hour and the peak

period. The total transit demand from the project would represent less than 1% of the total travel demand on the transit carriers in the year 2000. Peak-hour transit demand on Muni in the year 2000 would increase about 25% over 1984 levels in the Northeast, Northwest and Southwest corridors. Muni demand in the Southeast corridor would increase about 40% between 1984 and 2000. Peak-hour demand on the other agencies would increase between 30% and 70% during the period 1984 to 2000.

Peak-period increases in demand would be between 15% and 70% from 1984 to 2000. Overall peak-period transit travel would be expected to increase about 30% between 1984 and 2000. Peak-hour and peak-period passenger loadings would be worse than in 1984, although most systems would operate in acceptable conditions (Level of Service D or better). However, BART Transbay and Muni to the Southwest would be in Level of Service E during the peak hour and the peak period.

Although the data in Table 11 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. As shown in Table 10, total transit demand under Alternative 1 would be about 12% higher than under the Downtown Plan while transit demand from Alternative 4 would be about 9% lower than the Plan.

It is important to note that the Five-Year Plan improvements for the transit systems are designed both to provide for future demand increases, and also to improve service levels from existing conditions. For new vehicles to expand system capacity rather than represent simple replacement, operating revenues would similarly need to be increased. During the year 2000 peak hour, Muni service to the Southwest and BART service Transbay would exceed the desirable passengers per seat ratios of 1.25 and 1.30, respectively./9/ Although the transit demand in the two corridors in excess of the desirable loadings would be able to be accommodated under crowded conditions and thus would not be excess demand (that is, not beyond capacity), demand in excess of the desirable loadings would mean that additional transit service over that assumed to occur by 2000 would need to be provided to allow transit operations in the two corridors to meet the goals set by Muni and BART. To meet the goal of 1.25 passengers per seat in the peak hour, Muni would have to increase service by about 14% in the Southwest corridor over the amount of service assumed to occur in 2000. To meet the goal of 1.30 passengers per seat, BART would have to provide a transbay service increase of 14% over the amount of service assumed to occur by 2000.

If transit service were not increased beyond the amounts assumed to occur by the year 2000 in the Downtown Plan Draft EIR, transit operations (in terms of passenger comfort) would be slightly better than 1984 conditions. Peak-hour and peak-period passengers-per-seat ratios would be lower than 1984 ratios even though service (in some corridors) has been assumed to increase as much as 80% between 1984 and 2000.

Alternatively, if the Downtown Plan's Goals regarding increased transit use are achieved, and the proposals in the Plan regarding transit service improvements were to be fully developed and in place, the impacts on transit agencies would be less than described above. If the Goals were achieved, transit agencies would experience greater levels of demand than under this analysis but overall passenger loadings would be lower (and within desirable levels) because of increased transit service availability that would come about if the proposals stated in the Plan are developed. Section V, Mitigation Measures [p. 31 of this report], contains a measure that would provide the additional transit service required to mitigate the above impacts.

Also shown in Table 11, is an analysis of the conditions that would result from adding the travel from the Cumulative List to the 1984 base data, as is specified in the Transportation Guidelines. While not specifically comparable, these estimates calculated by adding the travel from the Cumulative List to the 1984 base data produce similar results to those from the Downtown Plan, although the overestimation of San Francisco travel is present in the list-based results, as explained above.

PEDESTRIAN MOVEMENTS

The primary pedestrian entrance to the retail portions of the project would be at the corner of Stockton and O'Farrell Sts. The building would be curved at the corner allowing more effective sidewalk space at the corner for pedestrians. Escalators located in the lobby would provide access to retail space on the lower level and on the second and third floors and to the public open space at terrace levels. Offices located on the fourth through sixth floors and the restaurant located on the seventh floor would have a separate entrance on Stockton St. at the southern portion of the building. Elevators would provide access to the office floors, the restaurant and to public open spaces at terrace levels. The

project would generate about 284 pedestrian person trip ends (pte) during the weekday noon 15-minute period and about 198 pedestrian pte during the weekday p.m. peak 15-minute period. Pedestrians generated by the project during the Saturday peak period would be almost all from the retail and restaurant portions of the project and would total about 200 pedestrians during both the late-morning and mid-afternoon peak periods. Although the retail travel to the project has been discounted for new travel into the downtown area, the prestrian analysis is based upon the undiscounted trip generation./10/

Operating conditions on sidewalks and crosswalks have been categorized into a Pedestrian Flow Regimen, shown in Table 12, below, which relates density of pedestrians in a specific time period (pedestrians per foot of clear sidewalk width per minute) to descriptors of quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk)./11/ Table D-2, p. A-35 shows the relationships between flow rates, walking speed, path choice, and interactions between pedestrians for each flow regime. Figure D-2, pp. A-36 - A-37, shows photographs of sidewalk conditions for each flow regime. Typically, an upper limit for desirable conditions is 14 pedestrians per foot per minute (p/f/m), defined as crowded, although conditions as high as 18 p/f/m, a congested condition, are possible with some conflicts among pedestrians./11/ Sidewalks and crosswalks in the vicinity of the site are most heavily congested during weekday noon peaks (see Section III. F., p. 46). Weekday and weekend p.m. peak are similar. The project would generate more pedestrians during weekday peaks then Saturday peaks. Since the weekday peak would therefore be a worst-case analysis, no further analysis of the Saturday peaks have been performed.

Table 12 compares existing pedestrian flows with predicted pedestrian volumes on Stockton St. at the intersection with O'Farrell St. in the year 2000. Stockton and O'Farrell St. sidewalks currently operate in impeded and unimpeded conditions respectively during both the noon and p.m. 15-minute periods. The crosswalk across Stockton St. operates in impeded conditions during both the noon and p.m. periods. The crosswalk across O'Farrell St. operates in constrained conditions during both the noon period and in impeded conditions during the p.m. period.

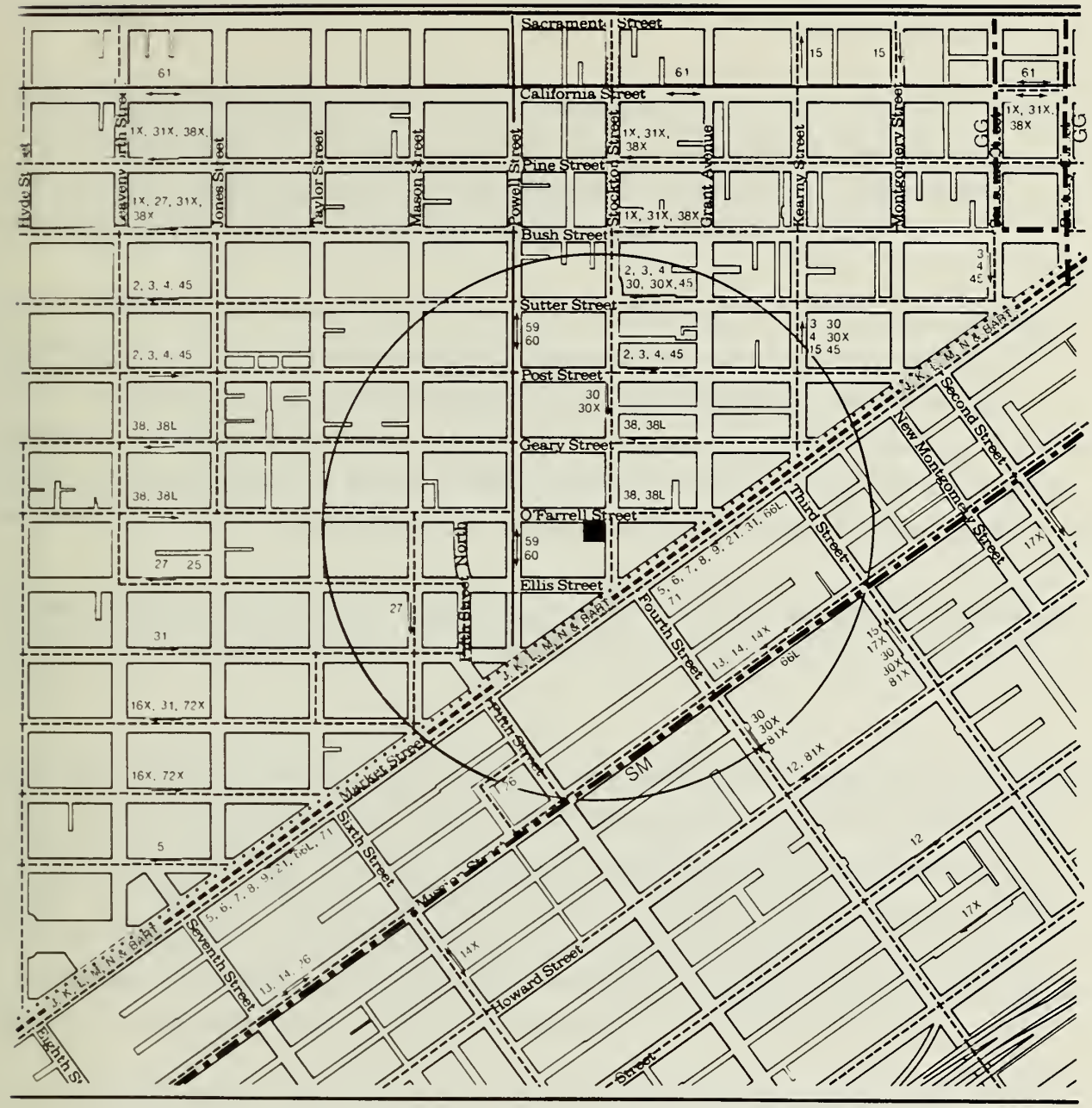
Sidewalk operations in the year 2000 would be in the unimpeded to impeded ranges during both the noon hour and the p.m. peak hour (see Table 12, p. 97). The project pedestrian

TABLE 12: WEEKDAY PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN AT STOCKTON AND O'FARRELL STREETS

	1984		2000			1984 + CUMULATIVE LIST		
	p/f/m/a/	Flow Regimen/b/	p/f/m	Flow Regimen	Project Percent	p/f/m	Flow Regimen	Project Percent
				NOON PEAK/c/				
Stockton St. Sidewalk/d/	4.9	Impeded	5.9	Impeded	14%	5.3	Impeded	15.3%
O'Farrell St. Sidewalk	1.5	Unimpeded	1.8	Unimpeded	4.5%	1.6	Unimpeded	5.1%
Stockton St. Crosswalk	3.2	Impeded	4.1	Impeded	3.5%	3.6	Impeded	4.0%
O'Farrell St. Crosswalk	6.5	Constrained	8.3	Constrained	14%	7.3	Constrained	16.1%
				P.M. PEAK /c/				
Stockton St. Sidewalk	4.0	Impeded	4.8	Impeded	12%	4.3	Impeded	13.0%
O'Farrell St. Sidewalk	1.4	Unimpeded	1.7	Unimpeded	3.4%	1.5	Unimpeded	3.8%
Stockton St. Crosswalk	2.3	Impeded	2.9	Impeded	3.5%	2.3	Impeded	3.9%
O'Farrell St. Crosswalk	5.7	Impeded	7.3	Constrained	11%	6.5	Constrained	13%

/a/ Pedestrians per Foot of effective sidewalk width per Minute.
/b/ See Table D-2 for description of pedestrian flow regimens.
/c/ Peak 15-minute periods, between 4:00 p.m. and 6:00 p.m.
/d/ All sidewalk segments and crosswalks are along project frontage.

SOURCE: Environmental Science Associates, Inc.



BART AND MUNI METRO STATION

BART ROUTE

MUNI METRO ROUTE

SURFACE TRANSIT ROUTE

CABLE CAR ROUTE

1, 2, J, K ROUTE DESIGNATION

ROUTE DIRECTION

PROJECT SITE

OTHER ROUTES

0 14
MILES

FIGURE 24:
MUNI AND BART ROUTES IN THE PROJECT AREA

SOURCE: San Francisco Street & Transit Map, August 1983

traffic would represent about 14% of the pedestrian volumes on the Stockton St. sidewalk during the noon hour and 12% during the p.m. peak hour. Pedestrian flows from the project would represent about 4.5% of the pedestrian volumes on the O'Farrell St. sidewalk during the noon hour and about 3.4% during the p.m. peak hour.

The crosswalks at the intersection of Stockton and O'Farrell Sts. would operate in the higher ranges of impeded and constrained conditions during the noon hour in the year 2000. During the p.m. peak hour, the Stockton St. crosswalk would operate in higher ranges of impeded conditions and the O'Farrell St. crosswalk would increase to constrained conditions. The project pedestrian flow in the O'Farrell St. crosswalk would be about 14% to 11% of the overall flow during both the noon hour and the p.m. peak hour.

Tne pedestrian increases on the O'Farrell St. crosswalk and the Stockton St. crosswalk in the year 2000 would somewhat impair right-turn-vehicle movements from O'Farrell St. to Stockton St.

Although the data in Table 12 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. Although not shown in Table 10, pedestrian travel demand is closely related to total travel demand because the majority of trips on the primary modes shown in Table 10 begin or end as pedestrian trips at a building. Thus, on the basis of total travel demand, Alternative 1 would be about 17% higher than the Downtown Plan while Alternative 4 would be about 5% lower than the Plan.

Also shown in Table 12 are the results of adding travel from the Cumulative List to the 1984 base data. While the results appear to be similar to those from the Downtown Plan Draft EIR, the list-based results are not comparable for the reasons stated above, particularly because the list-based travel would occur sooner than the year 2000.

TRAFFIC

Tne analysis of traffic impacts has been conducted on two levels; one level of analysis considered impacts at the regional screenlines, the second level of analysis considered impacts at intersections in and near the downtown.

Analysis of traffic conditions at the regional screenlines has been conducted for both the p.m. peak hour and the two-hour p.m. peak period. A.M. peak traffic conditions at the regional screenlines have the effect of metering the amount of traffic that reaches the downtown from outside of the City. This analysis has considered p.m. peak conditions. P.M. conditions are usually most severe on both freeways and streets within San Francisco, whereas a.m. peak conditions are most severe at locations outside of the City.

Traffic demand at the regional screenlines in 1984 (see Table 13) during the p.m. peak hour were found to use between 90% and 100% of the available capacity on the freeways and bridges. Although the capacity of the Bay Bridge is calculated to be 9,000 vehicles per hour (vph), the 1984 peak-hour demand shown in Table 13 represents the effective capacity. The demand figures shown in Table 13 for 1984 for the one-hour and two-hour periods are averages of several days and, thus, values for individual days may be different than the average.

Peak-hour freeway operating conditions in 1984 were found to be generally in Level of Service D to E conditions which would indicate unstable flows in the 35 mph to 45 mph range. Table D-3, Appendix D (p. A-38 of this report), shows the Level of Service for freeway operations. Peak-of-the-peak conditions within the peak hour would be expected to be worse than the hourly conditions because of surges in traffic demand during the peak hour. Conditions during the peak-period at the screenlines would be similar to those experienced during the peak-hour.

As shown in Table 13, demand during the peak hour in the East Bay and Peninsula corridors would be expected to increase about 15% between 1984 and 2000. Peak-hour demand in the North Bay corridor would increase by about six percent between 1984 and 2000. The project travel demand, about 18 p.m. peak-hour vehicle trip ends, would represent about .03% of the total demand in each corridor in the year 2000. Both the East Bay and Peninsula corridors would have excess peak-hour demand that would not be met during the peak period./12/ The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or incentives be provided.

TABLE 13: OUTBOUND REGIONAL AUTO DEMAND

Regional Auto Corridor	Capacity	1984 Demand	DOWNTOWN PLAN (2000) Demand	DOWNTOWN PLAN (2000) Project Percent	1984 + CUMULATIVE LIST Demand	1984 + CUMULATIVE LIST Project Percent
P.M. Peak Hour						
Bay Bridge (I-80)	9,000	8,540	9,790	0.03%	9,480	0.03%
Golden Gate Bridge (US-101)	7,200	6,740	7,150	0.03%	7,100	0.03%
US-101 (south of Harney Way)	8,000	7,390	8,400	0.02%	7,800	0.02%
I-280 (between Alemany Blvd. and San Jose Avenue)	8,000	7,610	8,650	0.02%	8,020	0.02%
P.M. Peak Period						
Bay Bridge (I-80)	18,000	17,880	19,330	0.03%	18,460	0.03%
Golden Gate Bridge (US-101)	14,400	13,870	14,850	0.02%	15,380	0.02%
US-101 (south of Harney Way)	16,000	14,200	16,530	0.01%	14,870	0.01%
I-280 (between Alemany Blvd. and San Jose Avenue)	16,000	13,620	15,890	0.01%	17,290	0.01%

SOURCE: Environmental Science Associates, Inc.

Operating conditions at the regional screenlines would be at or near capacity in Level of Service E. Traffic flow conditions would be expected to be very unstable and could experience temporary flow interruptions throughout the peak-period. Peak-of-the-peak conditions would be prevalent during the peak hour and may extend into the peak period.

As shown in Table 13, the list-based cumulative analysis, while not comparable to the year 2000 data, produces similar estimates of future demand. The results reflect the tendency of the list-based method to overestimate regional auto travel.

A capacity analysis of the intersections of Market and Fourth Sts. and Harrison and Fourth Sts. was performed because the project is expected to have the greatest effect on these intersections. The analysis indicates that the intersection of Market and Fourth Sts. is operating at vehicular Level of Service "B" during the p.m. peak hour (and p.m. peak period). (See Appendix D, Table D-4, p. A-39 for definitions and volume/capacity ratios for each Level of Service, and Table 14, below, for peak-hour volume/capacity ratios.) The intersection of Harrison and Fourth Sts. operates at Level of Service "C" during the p.m. peak hour. Peak-hour conditions would be expected to deteriorate at both of the intersections by the year 2000 (see Table 14); the intersection of Market and Fourth Sts. would have a higher volume-to-capacity ratio but there would be no change in the Level of Service. Expanded areas of traffic congestion would disrupt surface Muni operations. If the mitigation measures for transportation are implemented, the intersection operating conditions would be improved.

Impacts from the project on other streets would be less, because project traffic on them would be more dispersed. Routes of drivers going to garages were assumed to be sufficiently dispersed so that they would have no measurable effect on traffic volumes on the streets adjacent to the project. Project impacts at the intersections closest to the project site would result primarily from service-vehicle and pedestrian traffic.

As shown in Table 14, the list-based analysis yields similar Level of Service intersection conditions. While similar to the results of the Downtown Plan Draft EIR results, the list-based results are not comparable. The intersection of Market and Fourth Streets yields a lower V/C ratio under the list-based analysis because there are not many projects in the vicinity of this intersection and the list-based analysis is not sensitive to

TABLE 14: PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY (V/C) RATIOS AND LEVELS OF SERVICE (LOS) NEAR THE PROJECT SITE

	1984		2000		1984 + Cumulative List	
Intersection	V/C	LOS/a/	V/C	LOS/a/	V/C	LOS/a/
Market and Fourth Streets (p.m.) /b/	0.63	B	0.69	B	0.66	B
Harrison and Fourth Streets (p.m.) /c/	0.76	C	0.84	D	0.97	E

/a/ See Appendix D, Table D-4, p. A-39, for definition of Levels of Service.
/b/ Based on Manual intersection counts on October 21, 1980.
/c/ Based on Manual intersection counts on July 7, 1982.

SOURCE: Environmental Science Associates, Inc.

unspecified growth in the future. The intersection of Harrison and Fourth Streets yields a higher V/C ratio and decreased LOS because the list-based analysis overestimates auto use through the assumption of an unchanging modal split. The intersection of Fourth and Harrison Sts. is the entrance to a freeway on-ramp and thus would receive traffic from a larger portion of the list than would the intersection of Fourth and Market Sts.

Although the data in Table 13 and Table 14 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Altertatives in the Downtown Plan Draft EIR. As shown in Table 10, regional traffic demand under Alternative 1 would be about 34% higher than under the Downtown Plan while regional traffic demand from Alternative 4 would be about 13% lower than the Plan.

PARKING

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District./13/ The short-term parking demand,

while representing about 25% of the equivalent daily demand, is about 65% of the daily vehicle travel. Although the equivalent daily demand would leave about 10% of the parking supply vacant, surges in short-term demand (more travel in one period than in another period) can cause temporary localized overloads of parking facilities within various portions of the downtown, even though parking may be available elsewhere in the downtown.

The project would create a long-term parking demand of 25 spaces and a demand of 9 short-term spaces for a total demand of 31 equivalent daily spaces. The C-3 District would generate a demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent less than 0.2% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in the year 2000 if vehicular demand occurs as projected. However, as shown in Table 13, the analysis for the year 2000 forecasts excess auto demand in the peak hour and the peak period. If the excess demand is accommodated on transit or ridesharing; then the overall parking demand would decrease from the above estimate by about 2,300 spaces.

Alternatively, if the Goals of the Downtown Plan are met, total parking demand in the year 2000 would be about 48,100 equivalent daily spaces, an increase of six percent over 1984. If the Goals were achieved, there would not be a parking deficit.

The list-based analysis shows future demand for 11,400 spaces from projects in the C-3 District, which would be a total demand of 56,700 spaces. While similar to the 58,000 space (unmitigated) demand from the Downtown Plan, the list-based demand is not comparable for the reasons stated above, in particular because the list-based analysis assumes a static modal split and thus overestimates future auto demand.

"Although the parking demands discussed above are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. Although not shown in Table 10 parking demand from the C-3 District under Alternative 1 would be about 4% higher than under the Downtown Plan, while Alternative 4 would be about 1% lower than the Plan.

TRANSPORTATION POLICIES OF THE COMPREHENSIVE PLAN

The project would relate to several objectives and policies of the Transportation Element of the San Francisco Comprehensive Plan./14/ General Objective 1, Policy 6 states "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies." The project sponsor has agreed to participate in legally adopted funding measures for Downtown transit funding, proportional to demand created by the project. Policy 7, "seek means to reduce peak travel demand," would relate to project plans for a transportation broker to encourage "flex-time," transit and carpools and vanpools. The project would respond to Objective 2, Policy 2, "minimize obstruction to through pedestrian movement on sidewalks in the downtown core", by providing a curved setback at the corner of Stockton and O'Farrell Sts. This curved setback and the inclusion of a news vending stand on the ground floor would be consistent with recommendations made by the Center City Pedestrian Circulation Study, which calls for improvements on the west sidewalk of Stockton St./15/ An additional building setback to increase sidewalk space on Stockton St. is discussed as part of Alternative 4 and 5 (see Section VII., Alternatives to the Proposed Project).

LOADING

Table 15, below, shows total service-vehicle travel and average hourly service-vehicle demand for the project, based upon data published in Center City Circulation Program: Pedestrian Circulation and Goods Movement./15/ The new building would generate about 70 service-vehicle stops per day. Average hourly loading space needs are given in terms of spaces per hour per 10,000 gross sq. ft. of building space; average demand for the project would be 3.7 spaces per hour and peak hourly demand would be 4.6 spaces.

Two loading spaces, one 35 ft. in length and one 25 ft., are proposed, to be located off-street, with access from O'Farrell St. via one 24-ft.-wide curb cut. The maximum permitted curb-cut width is 36 ft./16/ These two spaces would not be expected to meet average hourly demand for loading spaces as stated above. This excess demand may be able to be accommodated by existing on-street loading zones on O'Farrell Street. Observation of the use of existing curbside loading spaces on O'Farrell St. suggests that double-parking on O'Farrell St. may occur as a result of the use of curbside loading space, thereby temporarily increasing traffic congestion on O'Farrell St.

The City Planning Code (City and County of San Francisco, 1979) specifies in Section 152, Article 1.5 that the amount of floor area proposed for the project would require the provision of two off-street loading spaces; the project would comply with this requirement. City Planning Commission Resolution No. 9286 (January 21, 1982) states the intent of the Commission to require adequate off-street loading. The Resolution requires projects to provide, as mitigation, loading space in compliance with Exhibit A of the Resolution. (The criteria of that exhibit are based on the same calculations shown in Table 15.) This project would be required to provide, as mitigation, four off-street loading spaces, each 35 ft. in length./17/ The provision of these four off-street loading spaces would meet the projects average-hourly demand for loading space.

The potential for pedestrian-vehicle conflicts would be increased by the service-vehicle traffic from the project crossing the O'Farrell St. sidewalk. Pedestrian volumes on O'Farrell St. are low, so the impact of the project service-vehicle traffic would not be as great as it would be in a more heavily traveled pedestrian area.

Analysis of the design of the proposed O'Farrell St. loading/service area indicates that standard single-unit trucks would be able to enter the loading area by backing in westbound from an eastbound position on O'Farrell St., as required by Department of Public Works standards. There would be insufficient maneuvering room to allow trucks to turn around on-site.

The service elevator in the loading area would connect with the office floors, and would be located in a separate utility core. Building directories and signs for the service elevators would be placed in the loading area.

The project would include on-site storage for trash containers. Containers would not be placed on streets or sidewalks except during actual trash pickup. The project would provide containers to collect and store recyclable solid wastes (such as glass, metal, computer cards, and newspaper) and the project sponsor would contract for recycling service.

TABLE 15: PROJECTED SERVICE-VEHICLE TRAVEL ATTRIBUTABLE TO THE PROJECT/a/

Use	Space (GSF)/b/	Daily Stops/ 10,000 sq.ft. of GSF/b/	Daily Stops	Spaces/Hour/ 10,000 sq.ft. of GSF/b/	Average Spaces/ Hour
Office	43,300	2.1	9	0.1	0.4
Retail	57,950	3.0	17	0.2	1.2
Restaurant	12,450	36.0	45	1.7	2.1
TOTALS			71		3.7

/a/ Service-vehicle travel has been included in total travel calculated for the project.
/b/ Gross square feet of floor space.

SOURCES: Environmental Science Associates, Inc.; Department of City Planning, 1980, Center City Circulation Program.

NOTES - Transportation, Circulation and Parking

/1/ Construction data are from S.R. Van Deusen, Williams + Burrows Construction Co., letter dated November 4, 1983, and telephone conversation, December 20, 1983.

/2/ The calculation methodology, regional travel distributions, office and retail trip generation rates, trip purpose and peak-hour and peak-period percentages are as specified in the "Guidelines for Environmental Impact Review: Transportation Impacts," Department of City Planning, September 1983. This document is incorporated by reference and is available for review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, Fifth Floor, San Francisco, CA.

/3/ 25,750 net new gross sq. ft. of office space X 0.0181 person trip-ends (pte) per day per net square foot + (41,000 new gross sq. ft. of retail and restaurant space X 0.15 pte per day per gross sq. ft. / 4 = 2,004 pte per day. Trip generation rates are from the Guidelines (see Notes 2 and 3).

/4/Final Environmental Impact Report, Neiman Marcus Department Store, EE 77.257, Certified December 12, 1978, San Francisco Department of City Planning, p. 58.

/5/ The Department of City Planning, Office of Environmental Review (OER), issued a memorandum, July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in EIRs to give a balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each.

/6/ Data are from Traffic Survey Series A-48 and MA-60, Spring 1977 and Spring 1983, Metropolitan Transportation Commission.

/7/ The analysis of historic trends in travel patterns is from the following sources: Metropolitan Transportation Commission, Travel Observations of the Bay Bridge Corridor, October 21, 1981. Homburger and Dock, Trends in Traffic Patterns at the Bay Bridge and Caldecott Tunnel, U.S. Department of Transportation, DOT-BIP-WP-32-3-77, July 1977; telephone survey of 500 drivers conducted in April 1980 by Golden Gate Transit, data supplied by Alan Zahradnik, Transportation Planner, on February 16, 1983; Office of the Auditor-Controller, Comparative Record of Traffic for the Month of November, May 27, 1937 through November 30, 1982, Golden Gate Bridge, Highway and Transportation District; San Francisco Municipal Railway Planning Division, Projections of Future Muni Demand and Vehicle Requirements, October 1982; San Mateo County Transit District, SamTrans Five-Year Transportation Development Plan: 1983-1988, April 1983; California Department of Transportation, CalTrain Caltrans/Southern Pacific Peninsula Train Service Five-Year Plan 1983-1988, July 1983; and Traffic volume counts from Department of Public Works, Bureau of Engineering, Division of Traffic Engineering and from 1983 San Francisco Cordon Count, JHK and Associates, July 1983.

/8/ See Downtown Plan Draft EIR, pp. II.9-II.11, for a comparison of the cumulative list projections with those of the Downtown Plan Draft EIR.

/9/ San Francisco Municipal Railway, Short-Range Transit Plan 1983-1988, July 1983. Bay Area Rapid Transit District, Short Range Transit Plan for the Five-Year Period July 1983 Through June 1988, August 1983.

/10/ Pedestrian trips generated by the project, in the project vicinity, have not been discounted, as was the travel demand, since it was assumed that all pedestrian trips from the project would be new trips on the sidewalks and crosswalks fronting the project site.

/11/ Pushkarev and Zupan, 1975, Urban Space for Pedestrians, Cambridge, Mass., pp. 85-117.

/12/ Table IV.E.4, p. IV.E.36, of the Downtown Plan Draft EIR contains discussion of the implications of excess demand at the regional screenlines.

/13/ The parking survey data and other supporting calculations and data used in the Downtown Plan Draft EIR transportation impact analysis are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, Fifth Floor."

/14/ San Francisco Department of City Planning, January 1983, Transportation, an Element of the Master Plan.

/15/ San Francisco Department of City Planning, 1980, Center City Circulation Program: Pedestrian Circulation and Goods Movement, Working Papers 1, 2 and 3, and Final Report.

/16/ City and County of San Francisco Department of Public Works, Order 62850, January 22, 1963, Standard Requirements for Automobile Driveways.

/17/ City and County of San Francisco, Exhibit A, Off-Street Freight Loading and Vehicle Space Requirement and Guidelines, January 1982, City Planning Commission Resolution No. 9286.

G. AIR QUALITY

Upon completion, the project would affect air quality in two ways. Emissions would be generated by project-related traffic (primarily carbon monoxide, CO), and by combustion of natural gas for building space and water heating (primarily nitrogen oxides, NOx). Transportation sources would account for over 95% of project-related emissions. Projected daily emissions of pollutants in 1990 from project-generated traffic, and from cumulative dvelopment traffic (based on the March 10, 1984 list of Cumulative Office Development in Downtown San Francisco), are shown in Table 16. These emissions are also compared in the table to emissions projected for cumulative C-3 District development by The Downtown Plan Draft EIR, and to total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan.

Motor vehicle trips associated with the project and with cumulative development would emit more nitrogen oxides (NOx) than hydrocarbons (HC), both of which are chemical precursors of ozone, while emissions from building natural gas combustion would consist primarily of NOx. On the basis of the LIRAQ (Livermore Regional Air Quality Study) ozone simulations conducted for the 1982 Bay Area Air Quality Plan, incremental NOx emissions in excess of incremental HC emissions could lead to a slight decrease in peak ozone concentrations in the Bay Area. This relationship between NOx and HC emissions would hold both under the cumulative list scenario and the Downtown Plan scenario shown in the table. Thus, emissions of HC and NOx generated by the project and by cumulative development would not increase Bay Area ozone concentrations. If the HC emission reduction strategies recommended in the 1982 Bay Area Air Quality Plan are successful, these concentrations are expected to attain the federal standard by 1987.

It is possible, however, that excess NOx emissions generated by the project and cumulative development could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, incremental NOx emissions could lead to violations of the NO_2 standard with concomitant health effects; could reduce visibility; or, to a relatively small extent due to the small magnitude of the increase and to dilution over time and distance, could increase acid rain further downwind, outside the Bay Area.

TABLE 16: PROJECTED DAILY POLLUTANT EMISSIONS

Pollutant	Emissions (tons per day) /a/ Project 1990	Cumulative List 1990/b/	Downtown Plan/c/ 1990	Downtown Plan/c/ 2000	Bay Area/d/ 1990	Bay Area/d/ 2000
Hydrocarbons	0.009	1.4	0.6	0.6	428	428
Nitrogen Oxides	0.012	1.8	0.8	0.8	558	610
Carbon Monoxide	0.107	17.0	6.8	6.6	1,952	1,883
Particulates	0.016	2.7	1.1	1.3	562	649
Sulfur Oxides	0.001	0.2	0.1	0.1	194	233

/a/ Project, Cumulative List, and Downtown Plan emissions calculated using BAAQMD, EMFAC6C vehicular emission factors. Emissions of HC, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust entrained from roadway surfaces. Calculations are based on a project-generated 410 daily vehicle miles travelled (VMT) at an average 15 mph for trips contained entirely within the City, and on a project-generated 6,025 daily VMT at an average 35 mph for commute trips extending outside the City.
/b/ Incremental emissions of downtown-area development based on list of projected Cumulative Office Development in Downtown San Francisco as of March 10, 1984 (see Appendix C, Table C-2, pp. A-__ - A-__).
/c/ Incremental emissions of C-3 District development, per The Downtown Plan Draft EIR, Table IV.I.2, p. IV.I.12.
/d/ Accumulative total emissions of Bay Area development, per ABAG, BAAQMD, MTC, 1982 Bay Area Air Quality Plan, pp. 42, 53, and 112.

SOURCE: Environmental Science Associates, Inc.

A special carbon monoxide (CO) monitoring program, called a "hotspot" program, was conducted by ABAG and BAAQMD during the winter of 1980-81 near the intersection of Geary and Taylor Sts., about four blocks northwest of the proposed project. The highest eight-hour average concentration was 11.5 ppm, which exceeds the 9-ppm state and federal standard by 2.5 ppm. The high one-hour average concentration of 15 ppm does not exceed the 20-ppm state standard or the 35-ppm federal standard. Another CO hotspot monitoring program was conducted at the same time near the intersection of Washington and Battery Sts., about ten blocks northeast of the proposed project. The high eight-hour average concentration was 10.1 ppm, which exceeds the standard by 1.1 ppm. The high one-hour average concentration of 15 ppm does not exceed the standards. These data indicate that some locations in San Francisco, particularly those near streets with high traffic volumes and congested traffic flows, may experience violations of CO standards during adverse meteorological conditions.

Curbside CO concentrations at selected intersections affected by project-generated traffic, and by cumulative development traffic (based on the March 10, 1984 cumulative list), were projected for worst-case conditions and are compared with the ambient standards in Table 17. These concentrations are also compared in the table to concentrations projected for cumulative development under traffic condition projected by The Downtown Plan Draft EIR. At present, the CO concentration at the 4th St. and Harrison St. intersection exceed the eight-hour standard. No future excesses of the applicable CO standards are projected at any location analyzed, under any scenario.

CO concentrations are predicted to be less in 1990 and 2000 than in 1984. In 1990 and 2000, area-wide traffic volumes in the downtown area would increase by about 8% and 15%, respectively, over 1984 volumes (according to The Downtown Plan Draft EIR). However, in 1990 and 2000 the average vehicle is expected to emit 32% and 43%, respectively, less CO than in 1984 due to ongoing state and federal emissions controls. The projected effects of these controls on new vehicles (and the retirement of older, more polluting vehicles) would more than offset the increases in traffic volumes and traffic congestion due to project and cumulative development.

Emissions of TSP generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.

Emissions of SOx generated by the project and by cumulative development would probably not bring San Francisco's SO_2 concentrations measurably closer to violating the standard.

The project, and other downtown development on the cumulative list or under the Downtown Plan, would not conflict with the pollution reduction strategies recommended by the 1982 Bay Area Air Quality Plan. These strategies consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. As discussed above, emissions associated with the project and with other downtown development are not projected by this EIR or by The Downtown Plan Draft EIR to increase ozone concentrations or to result in violations of CO standards, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan.

TABLE 17: PROJECTED WORST-CASE CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm) /a/ 1984	Cumulative List 1990/b/ w/Project	Cumulative List 1990 w/o Project	Downtown Plan 2000
4th St. & Harrison St.	1-hour	15.3	11.0	9.5	9.1
	8-hour	10.4	7.4	6.5	6.8
Market St. & 4th St.	1-hour	12.0	8.7	9.5	7.8
	8-hour	8.4	6.1	6.7	5.5

/a/ Calculations for all scenarios were made for worst-case (poor dispersion) meteorology, using the modified linear rollback method. Background concentrations were calculated to be 7.3 ppm for one hour and 5.6 ppm for eight hours in 1984, 5.4 ppm for one hour and 4.1 ppm for eight hours in 1990, and 4.8 ppm for one hour and 3.7 ppm for eight hours in 2000. No excesses of ambient standards are projected. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standard is 9 ppm.
/b/ Based on the list of projected Cumulative Office Development in Downtown San Francisco as of March 10, 1984 (see Appendix C, Table C-2, pp. A-__ - A-__).

SOURCE: Environmental Science Associates, Inc.

Alternative 1 to the Downtown Plan (covered in The Downtown Plan Draft EIR) would generate about 38% more emissions in 2000 (from development between 1990 and 2000) than would the Downtown Plan. Alternative 4 would generate about 7% less emissions than would the Downtown Plan. Emissions generated by Alternatives 2, 3, and 5 would fall within this range. The types of air quality impacts under these alternatives would be the same as those under the Downtown Plan; their magnitudes would vary in proportion to the differences in their emissions.

The pollutant emissions and CO concentrations shown in Tables 16 and 17 were projected for 1990 on the basis of two different sets of future growth assumptions, with differing results. In one case, a list of specific projects proposed, approved, and under construction was used (the list of Cumulative Office Development in Downtown San Francisco,

March 10, 1984). In the other case the employment growth trend approach of The Downtown Plan Draft EIR was used, and those projections presented. In both cases, the method for the air quality analyses was identical. However, the reults using projected cumulative development are not directly comparable with those from The Downtown Plan Draft EIR for several reasons.

First, it is reasonable to assume that the projected cumulative development on the list would be completed and occupied sometime between 1990 and 2000, rather than in either of those two analysis years which were used in The Downtown Plan Draft EIR. The pollutant emissions and CO concentrations were calculated for 1990 using the cumulative list, even though those projects are not expected to be completed until the mid-1990s, in order to provide the possibility of some comparison with The Downtown Plan Draft EIR results. However, this has the effect of artificially increasing the cumulative list results, because average-vehicle emission rates will decline with time, as a result of state and federal controls.

Second, the transportation analysis used for The Downtown Plan Draft EIR differs from that used for the cumulative list, as described in the Transportation section of this report (pp. __-__). Briefly, these differences include the fact that a cumulative-list based analysis assumes the same proportion of new employees would commute by private auto as is currently the case. In contrast, The Downtown Plan Draft EIR analysis projects a shift of commuters from driving alone to carpool and transit, because commute routes such as the Bay Bridge are already at or near capacity and could not accommodate all of the vehicles that would be used if the proportion of persons driving alone to work remained constant.

Other reasons for the differences include the use in the cumulative list analysis of a constant regional distribution of trips, whereas The Downtown Plan Draft EIR forecasts a declining percentage of new employees residing in San Francisco, and the lack in the cumulative list approach of discounting factors to account for trips between individual projects within the Downtown.

Thus, total (regional) vehicle-miles-travelled and the resulting pollutant emissions projected using the cumulative list approach are considered artificially high. On a local intersection basis, traffic volumes and the resulting CO concentrations might or might not be higher with the cumulative list approach, depending on the particular location. This is because the cumulative list method does not distribute traffic on all the same streets in

the same proportions as does The Downtown Plan Draft EIR method. For the two intersections analyzed here, the projected traffic volumes and CO concentrations are higher with the cumulative list approach.

H. ENERGY

Site development, fabrication and transportation of building materials, worker transportation, and building construction would require about 150 billion Btu of gasoline, diesel fuel, natural gas, and electricity./1,2/

Electricity and natural gas for project operation would be provided by PG&E. Electricity would be used for lighting, air conditioning, residential space heating, ventilation for the retail and commercial space, elevator operation, office equipment operation, water heating for retail and commercial areas, and plumbing system pumping. Natural gas would be used for residential water heating, and for the retail and commercial space heating. Energy conservation measures are proposed. The project would not incorporate solar or other renewable energy sources (see discussion under mitigations p. 137).

Interior illumination would be provided primarily by fluorescent lights at about three watts per sq. ft. The ventilation system for the retail, office and restaurant floors would be draw-through type variable-air-volume supply air-handling units located on each floor. A water economizer cycle system would use condenser water to generate chilled water through heat exchangers during hot weather. The residential penthouse would use split-system air-to-air heat pumps for space heating. Operable windows would be used for natural ventilation on this floor. Each floor would be separately sub-metered for electricity, unless one major tenant occupied the entire building. The residential floor would be separately metered for both gas and electricity. Gas service for the restaurant would also be separately metered. Natural lighting would be used for commercial areas adjacent to windows wherever feasible. A diesel generator would provide emergency power.

The project would consume about 316,000 Btu per sq. ft. annually (or about 1,100 Btu per sq. ft. per day), not including the residential penthouse units./3,4/ However, these figures include non-Title-24 energy uses, and some floor areas which do not come under the scope of Title 24. If energy consumption of the project is calculated according to Title 24 guidelines, the projected consumption of electricity would be 140,000 Btu per sq. ft.

anually, or about 475 Btu per sq. ft. per day./5,6/ The building's projected operational energy budget would meet be expected to meet performance standards of Title 24 of the California Administrative Code, which permit consumption of a maximum of 126,000 Btu per sq. ft. for office use, 180,000 Btu sq. ft. for retail use, and 131,000 Btu per sq. ft. for restaurant use, for a composite Title 24 building energy performance standard for this project of about 164,000 Btu per sq. ft./7/ The entire building is required to comply with Title 24 via performance or prescriptive standards. Title 24 regulations for nonresidential uses permit two methods of compliance through prescriptive and performance standards. The prescriptive standards require various individual measures such as insulation, wheather-stripping, and limited glazing areas. The performance standards are per-sq.ft. energy budgets for various commercial uses, which, if met through innovative design or uses of renewable energy resources, exempt the project from some of the prescriptive requirements. The City of San Francisco requires, as part of the analysis of energy impacts presented in the EIR, a comparison of the project's predicted performance with Title 24 performance standards as a relative measure of building energy efficiency. Actual determination of the building's compliance with Title 24, which can be via either the prescriptive or the performance standards, is made by the Bureau of Building Inspection at the time building plans are submitted as part of the review. Although the design of the building is not final and plans have not been submitted to the BBI, the sponsor has stated that the project would comply with Title 24 regulations.

Annual project energy consumption is shown in Table 18.

The project would have a connected electrical load of about 1730 kilowatts and would consume about 3.9 million kilowatt-hours (kWh), or 40 billion Btu, of electricity per year./7/ The monthly electrical demand would be about 325,000 kWh. The estimated average electrical consumption for the project of about 2.7 kWh per sq. ft. per month would be more than the estimated average monthly requirement of about 1.3 kWh per sq. ft. per month for six high-rise office buildings of similar size recently proposed in San Francisco./8/ The project has a higher per-sq.-ft. consumption of energy than the six high-rise office buildings, because of its high proportion of retail space, which consumes more energy than does office space, and because of the inclusion of non-Title-24 uses and floor areas such as corridors, bathrooms and mechanical space in calculating energy use;

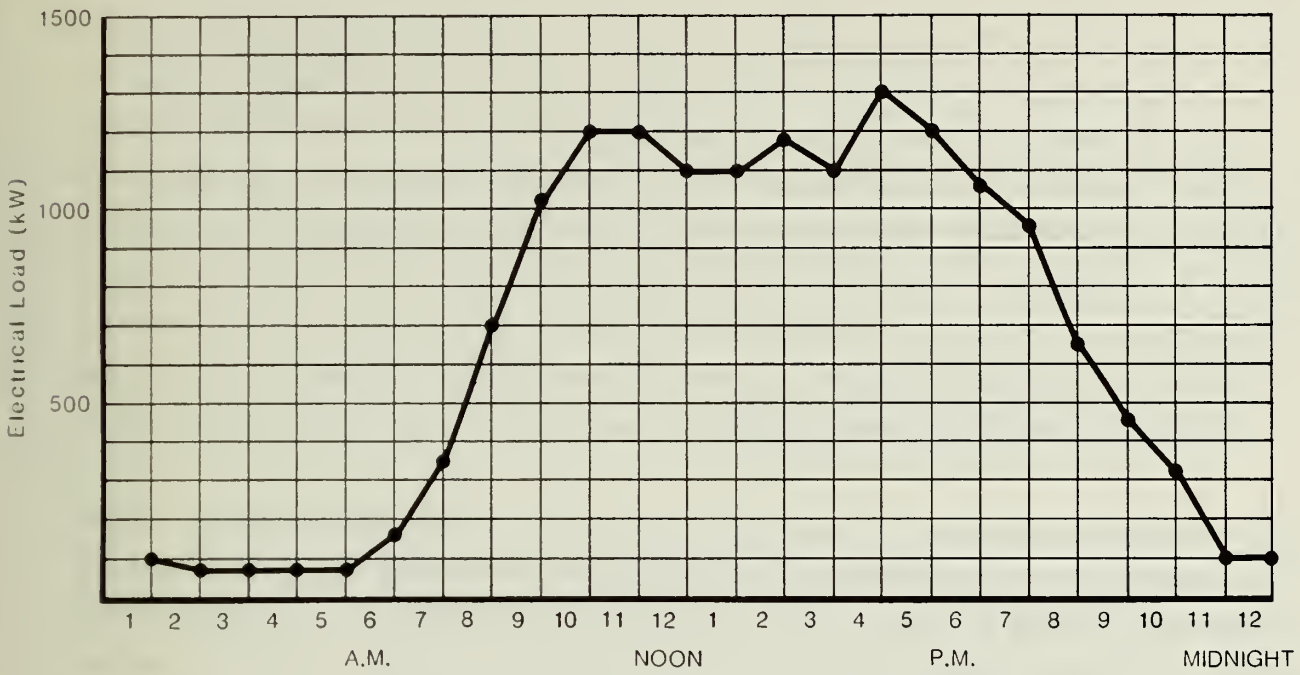
which usually are not included in energy consumption projections for comparison to Title 24 standards. Peak electrical demand would be about 1,300 kWh and would typically occur at about 4 p.m. on July afternoons. This peak demand would not coincide with PG&E's system-wide electrical consumption peak, which occurs in late afternoon in August. Projected peak-day demand and average annual electrical consumption distribution curves are shown in Figure 25.

TABLE 18: ESTIMATED ANNUAL PROJECT ENERGY CONSUMPTION

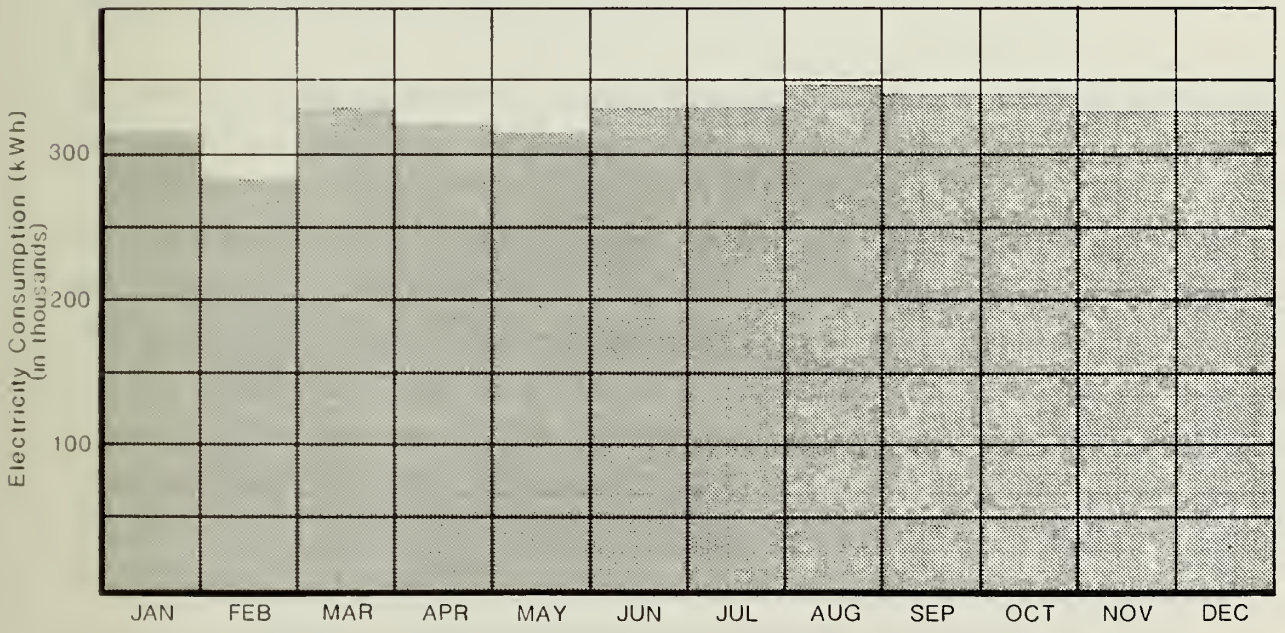
	Units of Energy in thousands	Btu At-Source in billions*	Barrel Oil Equiv. (bbl. oil)
Building Operation			
Electricity	3,900 kWh	40.0	6,800
Natural Gas	630 cu. ft.	0.7	130
Transportation**			
Gasoline & Diesel	---	20.67	3,515
TOTAL PROJECT	---	61.37	10,435

* Conversion factors: electricity = 10,239 Btu/kWh; natural gas = 1,121 Btu/cu. ft.; gasoline = 140,000 Btu/gallon; oil = 5.88 million Btu/bbl.; diesel fuel = 160,000 Btu/gallon
** for vehicle trips generated by the project.

SOURCE: Environmental Science Associates, Inc.



Daily Electrical Load Distribution (September)



Annual Monthly Electricity Consumption

FIGURE 25:
PROJECTED ELECTRICITY CONSUMPTION

SOURCE:
Cammisa and WIPF, Consulting Engineers,
and Environmental Science Associates, Inc.

The project would consume about 630,000 cu. ft. (about 704 million Btu) of natural gas annually, or about 52,500 cu. ft. (60 million Btu) per month./5/ This represents consumption of about 0.6 cu. ft. (640 Btu) per sq. ft. per month for the project, as compared with an estimated average of 1.5 cu. ft. (1,700 Btu) per sq. ft. per month for six high-rise office buildings of similar size in San Francisco./8/ Peak demand for natural gas would be about 625 cu. ft. per hour and would occur at 10:00 a.m. on December mornings. This would not coincide with the PG&E system-wide peak period for natural gas usage, which occurs in the early evening hours in January. Projected peak-day demand and average annual natural gas consumption distribution curves are shown in Figure 26.

Project-related transportation would cause additional, offsite energy consumption. Based upon the project trip generation described in the Transportation section (Section IV. F., p. 81), project-related trips would require about 97,000 gallons of gasoline and diesel fuel and about 660,000 kWh of electricity annually. The total annual transportation demand, converted to a common unit using at-source factors, would be about 20 billion Btu. This projected use is based upon the mix of vehicles expected in California in 1987. Generally, average vehicle fuel use is expected to decrease until 1987 as the vehicle fleet becomes more efficient and fuel becomes more expensive.

The project's conformance with the energy conservation plans and policies of the Energy Element of the Master Plan are shown in Table 19.

The Department of City Planning predicts future power consumption, based on the electricity use of 18 recently constructed buildings in the downtown area, to be about 18 kWh per sq. ft. per year./9/ This number includes an estimate of the base power consumption of the building core, such as air circulation, cooling, mechanical and lighting loads, as well as power demands due to increased use of electronic office machines including copiers, computers and word processors, which are generally in operation the entire work day. Yearly estimated electrical consumption for the projected 19 million sq. ft. of additional office space at the time of buildout of the March 10, 1984, list of projected Cumulative Office Development in Downtown San Francisco would be approximately 340 million kWh of power per year. Previous electrical consumption estimates in EIRs did not include power used by office machinery.

PG&E, in examining its ten year load growth projections for San Francisco, believes that growth rates of net new office space in the downtown area will diminish in the next decade from the historic figure of 1.5 million sq. ft. per year to between 1 million and 1.2 million sq. ft. per year./10/ The utility company's current analysis of a typical office building yielded an annual kilowatt hour consumption of about 17 kWh per sq. ft. This agrees with the City's estimate (noted above), within the limits of estimation methodology. Using these figures, total increased energy demand for the next decade would be approximately 200 million kWh of electricity per year, or less than half of demand projected using the cumulative list. The lower PG&E prediction is largely due to its lower estimation of future development.

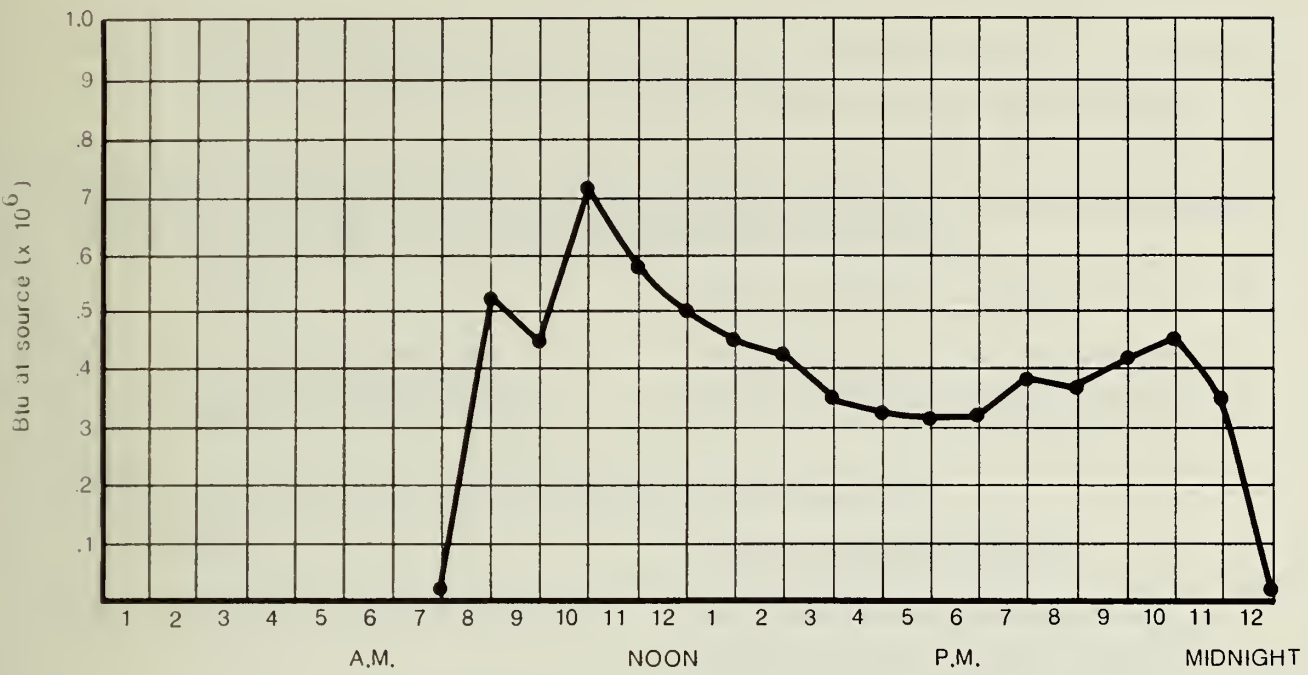
Projections of energy use discussed in the Downtown Plan Draft EIR indicate an increase of about 210 million kWh of electricity per year between 1984 and 1990 as a result of all new development occuring in the C-3 District. From the period 1990 to 2000, electrical consumption rates would increase annually by 330 to 350 million kWh above present figures, or 120 million to 140 million kWh above the increases estimated for the 1984-1990 period. Both these estimates are for growth that would occur under the Downtown Plan scenario./11/ Energy requirements for development that would occur with the Alternatives proposed in the Downtown Plan Draft EIR predict an increased demand of between 300 million kWh per year to 500 million kWh per year between 1984-2000./12/

Estimates referred to in the Downtown Plan Draft EIR are not directly comparable to those estimates made by applying kWh/sq. ft./yr. generation factor to the square footage of projected cumulative development (List method) for two reasons. First, the energy consumption made using the List method estimate energy demand at the time of full buildout (mid 1990's) rather than during the 1984-1990 and 1990-2000 time periods as in the Downtown Plan Draft EIR, and secondly, about 75% of the projects on the March 10, 1984, list of projected Cumulative Office Development in Downtown San Francisco fall within the C-3 District boundary, which means the list method estimates energy consumption for a larger area than the Downtown Plan Draft EIR.

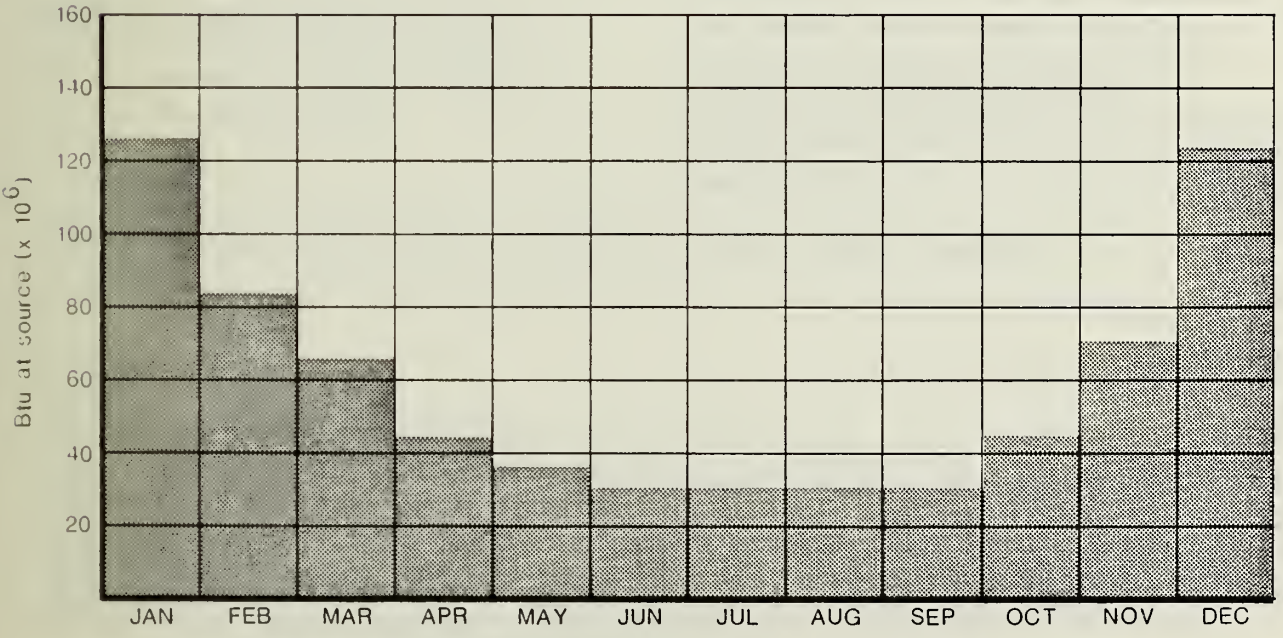
The PG&E projection cannot be compared to the projections in the Downtown Plan Draft EIR because they cover different time periods. A comparison of the Downtown Plan and PG&E estimates for electricity use in downtown San Francisco for the last decade of the century is currently being prepared by PG&E in a report to be released later this year.

Natural gas consumption for new office development would be less than current demand which include consumption in older, less energy-efficient buildings. The Department of City Planning estimates that natural gas use by new buildings in the year 2000 would be 11 cu. ft./sq. ft./yr./7/ The City Planning Department further estimates that between 1984 and 1990 gas consumption will grow by 300 million cu. ft. per year. PG&E is currently assessing projected demands for the San Francisco area in a report to be released later this year.

PG&E plans to meet increased San Francisco energy demands to the year 2000 are discussed on pp. IV.G.12-14 of the Downtown Plan Draft EIR, which are hereby incorporated by reference.



Peak Day Demand of Natural Gas (December)



Average Monthly Natural Gas Consumption

FIGURE 26:
PROJECTED NATURAL GAS LOAD DISTRIBUTION

SOURCE:
Charles and Braun, and
Environmental Science Associates, Inc.

TABLE 19: APPLICABLE ENERGY CONSERVATION PLANS AND POLICIES

	Policy	Project Compliance Status
Objective 3: Reduce consumption in the non-residential sector by improving energy management practices and raising building efficiency standards.		
3.2:	For large scale projects, encourage cogeneration or connection to district heating.	The project would not connect to the district heating system in Stockton St., nor would it include cogeneration.
Objective 4: Increase the energy efficiency of transportation		
4.1:	Promote alternatives to motor vehicle use.	The project would be convenient to public transit and would include bicycle racks and pedestrian amenities. The project would have a transportation broker to institute a Transportation Systems Management program; this would also reduce total vehicle-miles-travelled.
4.2:	Promote a land use pattern which reduces the distance between working, shopping, and living areas.	The project would reduce distances between working and shopping areas for some project employees, by providing retail and office space in the same building. It would also concentrate retail use geographically.

SOURCE: City of San Francisco and Environmental Science Associates, Inc.

NOTES - Energy

/1/ The British thermal unit (Btu) is a unit of heat energy equivalent to the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea-level; all Btu values given in this section are at-source values. The term "at source" means that adjustments have been made in the calculation of the Btu equivalent to account for the energy required for generation and transmission, as specified in Energy Conservation and Design Manual for New Nonresidential Buildings, Energy Resource Conservation and Development Commission, 1977.

/2/ Hannon, B., et al., 1978, "Energy and Labor in the Construction Sector," Science 202: 837-847.

/3/ The project's energy consumption characteristics were projected by Charles & Braun, Consulting Engineers, and by Cammisa and Wipf, Consulting Engineers, using a CEC-certified computer energy modeling program, DOE-2.1B.

/4/ California Energy Commission, 1980, Conservation Division Regulations Establishing Energy Conservation Standards for New Non-Residential Buildings.

/5/ The project's conformance with Title 24 was projected using a CEC-certified computer energy modeling program DOE-2.0A; Ken Wilke, Associate Engineer, Charles & Braun, letter dated February 13, 1984.

/6/ The Title 24 performance standards are based on certain assumptions about occupant loads, occupancy schedules, weather conditions, and other parameters affecting energy consumption. Actual building energy consumption, which includes many occupant loads not included in the Title 24 assumptions - such as copiers, computer systems, and other heavy appliances - often exceed the Title 24 values. To determine whether the building complies with the performance standard, energy use must be modeled using the same assumptions as were used in developing the Title 24 standards. Compliance with the performance standards, however, is optional (see Note # 7).

/7/ The discussion of operational energy consumption is based on information provided by Charles & Braun Consulting Engineers and by Cammisa and Wipf Consulting Engineers, of San Francisco, California; this information is on file at the San Francisco Department of City Planning, 450 McAllister Street, and can be reviewed during normal business hours.

/8/ The following projects have been included in the comparative analysis of energy consumption: 101 Mission, Post/Kearny, Bank of Canton, 1155 Market, 466 Bush and 90 New Montgomery.

/9/ Downtown Plan DEIR, Appendix N, Footnote 3, p. N.8.

/10/ Ken Austin, Commercial-Industrial Marketing Supervisor, Pacific Gas and Electric Company, letter, March 23, 1984. Available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

/11/ Downtown Plan DEIR, pp. IV.G.1 - IV.G.17.

/12/ Downtown Plan DEIR, pp. VII.G.1 - VII.G.4.

I. GROWTH INDUCEMENT

The project would include about 57,950 sq. ft. of retail space, about 43,300 sq. ft. of office space and and about 12,450 sq. ft. of restaurant area. Employment at the site

would increase from about 113 to about 360 people. Occupants of the proposed project are unknown, but could include tenants currently on the site, tenants from other San Francisco locations, tenants who could relocate from outside San Francisco, and businesses new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project is fully leased, however, and the availability of its space does not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco could eventually increase by about 247 jobs.

The project is proposed as a response to a demand for retail space in San Francisco's Retail District, and to a demand for office space in the downtown area. This demand would exist whether or not the proposed project is built. The demand for retail space reflects the growth in the local, as well as national, economy, and growth in San Francisco's tourist business. The demand for office space reflects the trend of growth in service sector and headquarters office activities and employment. Increases in downtown retail and office space and employment would contribute to the continued growth of local and regional markets for housing, goods and services.

It is expected that many downtown workers would want to live in San Francisco. Employment growth, however, would not be reflected directly in increases in demand for housing and city services to residents, as some new jobs would be held by individuals who already live and work in the City; or who live in the City but who previously either did not work, or worked outside the City; or who live in surrounding communities.

Any net increase in employment downtown would increase the demand for retail goods and food services in the area. The project would alleviate this demand somewhat by providing more retail shops and food services than it would displace.

Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development. No expansion to the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.

V. MITIGATION MEASURES WHICH WOULD MINIMIZE THE POTENTIAL IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified which would reduce or eliminate potential significant environmental impacts of the proposed project. Some of these measures have been adopted by the project sponsor or project architect and contractors, and thus are proposed as part of the project; some are under consideration; some have been rejected and some could be implemented by other public agencies. The mitigation measures and their status are discussed below. Measures under consideration, or measures rejected by the project sponsor, may be required by the City Planning Commission as conditions of approval.

HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

MEASURE PROPOSED AS PART PART OF THE PROJECT

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

URBAN DESIGN

MEASURES PROPOSED AS PART OF THE PROJECT

- In order to reduce obtrusive light or glare, the project sponsor would use nonreflective glass on all parts of the building.

- The project would feature a facade composition and ornamentation designed to enhance the pedestrian environment in the Retail District.

  The project would feature a building base clad largely in glass and a pronounced building entrance at Stockton and O'Farrell Sts., which would provide visual interest at this intersection.

  The building would be scaled to harmonize with surrounding, older structures.

- The project would include landscape elements, such as mature street trees and sidewalk plantings on O'Farrell St. Landscaping would be implemented in consultation with the Department of Public Works in order to maintain adequate sidewalk pedestrian flows, and to coordinate with other development on this block.

TRANSPORTATION, CIRCULATION AND PARKING

MEASURES PROPOSED AS PART OF THE PROJECT

- Should Ordinance 224-81, which requires the sponsor to contribute funds for maintaining and augmenting transportation service in an amount proportional to the demand created by the project, be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted in lieu thereof that are equitable and legal, which the City adopts to apply to all developments which are similarly situated.

- A member of the building management staff would be designated as a "transportation broker" to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for car pool and van pool information. This measure would reduce the transportation impacts of the project.

- Secure, safe bicycle storage facilities would be provided relative to the demand generated by the project for commuters and short-term visitors.

- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 3:00 p.m. to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects.

- The Stockton St. frontage of the project would include improvements proposed in the San Francisco Center City Pedestrian Circulation and Goods Movement Study to improve pedestrian circulation on Stockton St. including setting back the building at the corner of Stockton and O'Farrell Sts. The project would likely include a tobacco, candy, news and/or convenience store on the ground floor, which would sell newspapers; this would help, although not guarantee, the removal of news vending machines from Stockton St.

- While subsurface sidewalk vaults are discouraged, should they be needed, the project sponsor would design subsurface sidewalk vaults to allow for possible future widening of adjacent streets and vault design shall be of sufficient strength to carry maximum vehicular live and dynamic loads. Design of the vault area to accommodate street trees could also be made, subject to Department of Public Works approval. In addition, should vaults exist or be installed as part of the project, project sponsor would accommodate and pay for the installation of all subsurface footings, supports and foundations as may be required for future public improvements such as street lights, street trees, trolley wire poles, signs, benches, transit shelters, etc. within project vault areas. Placement of such improvements is entirely at the discretion of the City.

- The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.

- Building directories and signs for the service elevators would be placed in the loading area.

- Creating a driveway onto the project site from O'Farrell St., allowing trucks to get completely off the street, would leave the south side O'Farrell St. curb lane open. This would alleviate any potential congestion problems or Muni delays caused by the closure of that lane.

MEASURES THAT COULD BE IMPLEMENT BY OTHER CITY AGENCIES

- The north side curb lane, opposite the project site, on O'Farrell St., presently used for meter parking and loading, should be designated a no parking or stopping zone during project construction. This would help alleviate traffic congestion and Muni delays on O'Farrell St. caused by the closure of the south side curb lane during project construction. This measure could be implemented by the Department of Public Works.

- Concentrated enforcement of curb parking and stopping restrictions along the south side of O'Farrell St. west of the site would help alleviate congestion problems and Muni delays caused by the closure of the south side, O'Farrell St. curb lane during project construction. This measure could be implemented by the Department of Police.

MEASURES NOT INCLUDED IN THE PROJECT

- Project sponsor would provide sufficient number of off-street freight and service vehicles loading and storage spaces to accommodate average hour demand in order to meet the guidelines adopted by the City Planning Commission (Resolution No. 9286 on January 21, 1982). These spaces shall have ready access to freight elevators, can be clearly designated through appropriate graphics, be exclusively available for freight and service vehicles, general parking being prohibited. However, the project sponsor is currently considering a reduction in square footage of the restaurant, which could result in reducing the required number of loading spaces to two.

- A building setback of four feet on the Stockton St. frontage would improve pedestrian conditions on the Stockton St. sidewalk from those conditions shown in Table 12 on p. ***. The four feet of additional sidewalk space that would result from the setback of the Stockton St. facade of the project would increase the effective width of the Stockton St. sidewalk by about 35% over the existing 11.5 feet. The project pedestrian travel on the Stockton St. sidewalk represents increases of from 14% (Saturday mid-afternoon) to 17% (weekday noon) of existing pedestrian volumes on the Stockton St. sidewalk. Thus, the setback would completely mitigate the impacts of the project pedestrian travel on the Stockton St. sidewalk and would additionally, mitigate an equivalent amount of cumulative pedestrian travel impact. The project sponsor has rejected this measure because the costs of the loss of the project's most valuable pedestrian-level retail space do not, in his opinion, outweigh the benefits of the mitigation, and because he believes that it would be inconsistent with the existing architectural content of the downtown retail core which features street walls to the sidewalk levels.

- Within a year of full occupancy of the project, the project sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. This measure would provide needed information to aid in transportation planning within the City. Alternatively, at the request of the Department, the sponsor would provide a fair and equitable in-lieu contribution toward an overall transportation survey for the downtown area to be conducted by the City. The project sponsor has rejected this measure because it would not be cost-efficient.

NOISE

MEASURE PROPOSED AS PART OF THE PROJECT

- The project sponsor would require the contractor, through an agreement in the construction contract, to muffle construction equipment. Any impact tools and equipment needed for construction would have intake and exhaust mufflers, and jackhammers would be equipped with shields or shrouds recommended by the manufacturers and approved by the Director of Public Works (Section 2907(c)

of the Noise Ordinance). The contractor would also construct barriers around the site and around stationary equipment, such as compressors. Holes for temporary shoring piles would be pre-drilled.

AIR QUALITY

- The project sponsor has agreed to implement mitigation measures identified for traffic and energy impacts (see section IV) to also mitigate air quality impacts. Reducing vehicular traffic through increased ridesharing (carpool, vanpool, and transit), and implementing flexible and/or staggered work hours would reduce local and regional emissions of all pollutants. Reducing natural gas combustion and electricity generation would reduce local and regional emissions of all pollutants.

- The project sponsor has agreed to require the project contractor to sprinkle demolition sites with water continuously during demolition activity; sprinkle unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil sand, or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce TSP emissions. Project sponsor has agreed to require the project contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use, and a requirement for specific maintenance programs (to reduce emissions) for equipment that would be in constant use for much of a construction period.

ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

- A variable-air-volume air conditioning system would control the volume of conditioned air so that the building would maintain a comfortable temperature efficiently.

- An air or water economizer cycle system using condenser water to generate chilled water would be installed, so that in hot weather the heat exchangers would cool the water without using excessive amounts of electricity.

- The project sponsor would contract for recycling services. This measure has been rejected by the project sponsor because it would not be cost-effective.

MEASURES NOT INCLUDED IN THE PROJECT

The following measures were rejected by the project sponsor because the project engineer's experience indicates that they are unlikely to be cost-effective. Should calculations submitted with the building permit application for Title 24 energy conservation compliance show that any one of these measures would be cost effective, the project sponsor would include them as part of the project.

- An active solar water heating system to reduce natural gas consumption could be installed.

- One year after occupancy of the structure, actual energy consumption, converted to thousands of British Thermal Units, from Pacific Gas and Electric monthly billings, shall be reported to the Department of City Planning. If the consumption exceeds applicable state standards in effect at the time of issuance of the Building Permit, a PG&E or other certified energy audit shall be performed, and those recommended energy conservation measures which have a three-year or less payback shall be impelmented. This measure was rejected by the project sponsor because the building as planned would be energy-efficient.

- The project could include cogeneration (use of waste heat from fixtures) devices. This measure was rejected by the project sponsor because it would not be cost-effective.

- The project could connect to the district heating system in Stockton St., which distributes waste heat in the form of steam.

GEOLOGY/TOPOGRAPHY

MEASURE PROPOSED AS PART OF THE PROJECT

- A preliminary geotechnical report has been prepared by a California-licensed engineer for the project sponsor. A final report would be prepared before commencement of construction. The project sponsor and contractor would follow recommendations made in that report regarding construction of the proposed building.

WATER

MEASURE PROPOSED AS PART OF THE PROJECT

- Should dewatering be necessary, the final soils report shall address the potential settlement and subsidence impacts of dewatering of the site. Based upon this discussion, the soils report shall contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works will require that a Special Inspector (as defined in Article 3 of the Building Code) will be retained by the project sponsor to perform this monitoring. If, in the judgement of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service under the street would be borne by the contractor.

- Groundwater pumped from the site during dewatering would be retained in a holding tank to allow suspended particles to settle (if this were found necessary by the Industrial Waste Division of the Department of Public Works) to prevent sediment from entering the storm drain/sewer lines. Excavation would be performed mainly during the summer months, when the groundwater level can be expected to be relatively low.

HAZARDS

MEASURE PROPOSED AS PART OF THE PROJECT

- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the plan developed for the proposed building. The emergency plan for the proposed building would be reviewed by the Office of Emergency Services and implemented by building management insofar as possible before issuance by the Department of Public Works of final building occupancy permits.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

This chapter identifies impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or other mitigation measures that could be implemented, as described in Section V., Mitigation Measures, p. 123. The following are suggested significant impacts; the City Planning Commission will make the final determination of significant impacts as part of their Certification Resolution for the EIR. This chapter will be revised in the Final EIR, if necessary, to reflect the Commission's findings.

CUMULATIVE DEVELOPMENT

The project would contribute to cumulative pedestrian traffic on Stockton and O'Farrell Sts.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses the environmental impacts associated with these alternatives, and the reasons the alternatives were rejected by the sponsor in favor of the project. An exclusively retail-oriented alternative was considered for inclusion in the EIR and was rejected because it tended to increase the most relevant environmental impacts. The City Planning Commission could approve an alternative over the proposed project if the Commission finds the alternatives are more environmentally appropriate for the site.

A. ALTERNATIVE I: NO PROJECT

This alternative would entail no change to the project site as it now exists. The four buildings now on site would remain as they are, presumably in substantially the same conditions and uses that exist in January 1984 (see Section III., Environmental Setting, for a discussion of existing conditions).

The site's visual characteristics would remain as they are at present. Current levels of vehicular and pedestrian traffic generation, parking and transit demand, air quality effects, noise, energy consumption and on-site employment would continue. Employment and fiscal effects attributable to the project would not occur (see Section IV., Environmental Impacts). No effects would occur as a result of construction.

The project sponsor has rejected this alternative because it would not use the development potential of the site permitted by the Planning Code. It would not provide the first class restaurant or high quality retail and office space in response to the sponsor's perceived demand in the area. The sponsor believes the project would provide a more attractive and cohesive appearance to the site with a better defined relationship to buildings located on facing corners than is provided by the existing buildings.

B. ALTERNATIVE 2 - PRESERVATION OF 65 STOCKTON STREET BUILDING

This alternative would preserve the three-story building at 65 Stockton St., which currently houses the Leeds Shoe store on the ground floor and offices on the second and third floor. As is discussed in the text, this building was rated "B" in the Heritage Study, Splendid Survivors (but has since been re-rated to "C**"), and is on the City Planning Commission's List of Architecturally and/or Historically Important Buildings (although the listing was based on the earlier "B" rating by Heritage). This alternative, like the project, would be a mixed use, office/retail development but would contain no restaurant or residential uses. It would have 58,230 sq. ft. of retail on four levels, including a basement level (under the areas of new construction only), 60,010 sq. ft. of office on five levels and a mechanical penthouse level. It would be 106 ft. tall to the top of the eighth floor, excluding the mechanical penthouse. The building would step in at the seventh and eighth floors on both the Stockton St. and O'Farrell St. frontages. The mechanical level would have a hipped roof (see Figure 36). The three-story existing building would define the corner, and would be restored to its original design (which incorporated ziggurat detailing at the upper edges of the ground-floor display windows); the restoration would be carried out so that the building would once again merit a "B" rating. Because floor-to-ceiling heights would be determined by those in the retained building, this design would not have a high-ceilinged ground floor.

This alternative would have less bulk than the project. It would appear as a tall building between two shorter buildings (the 65 Stockton St. building is about 40 ft. tall and the building adjacent to the project site on the south is about 50 ft. tall) and might provide less of a visual relationship to

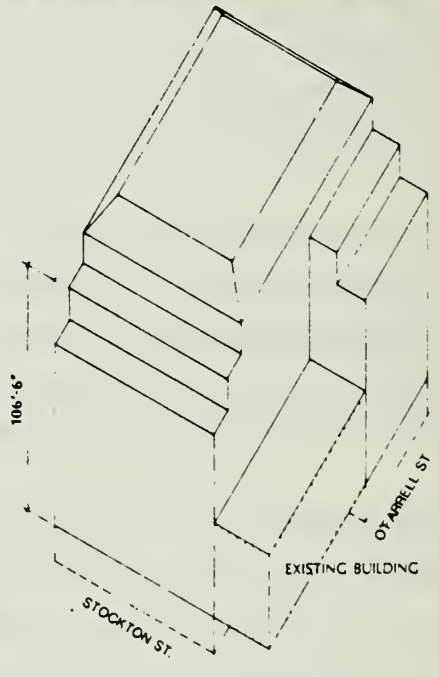


FIGURE 27
PRESERVATION ALTERNATIVE

SOURCE

buildings on facing corners, buildings which, in height and massing, are similar to the project as proposed. (Buildings on facing corners are 80 to 105 ft. in height and occupy lots with greater street frontages than the site buildings.) This alternative would provide employment for about 390 people, 30 more than the project.

This alternative would generate net increases over existing site uses of 1,850 daily person trip ends (PTE), including 185 vehicle trip ends and 360 Muni trip ends. Loading trips would number 20 daily. This alternative would generate 92% of the daily PTE generated by the project; of these, the number of auto trips would be about the same, while Muni trips would be more numerous (112% of those estimated for the project). This alternative would generate slightly fewer weekday peak pedestrian trips, while Saturday peak pedestrian trips would be about the same as the project (this is due to the similarity in retail area between this alternative and the project).

Revenues would be similar to those of the project, although probably somewhat higher, as would the costs of providing public services to the site. Environmental effects would generally be similar to, although slightly greater than, those identified for the project because of the similarity in size. This alternative would result in the restoration of the previous "B" rating to the Imperial Realty Building (65 Stockton St.). The "C"-rated buildings on the site would be demolished, as with the project.

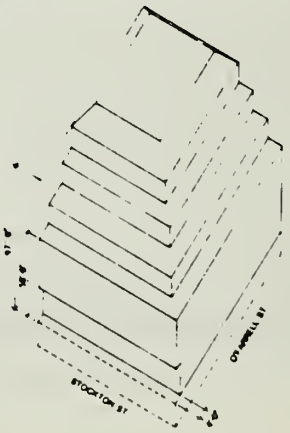
This alternative would have shadow impacts somewhat less pronounced than those of the proposed project and somewhat more pronounced than those for the Downtown Plan Alternatives (see below).

The sponsor has rejected this alternative because, in the sponsor's opinion, the project provides a more attractive appearance for the site and a stronger relationship to facing corner buildings, which the project is intended to reflect in its height, massing and architectural detailing. This alternative eliminates the possibility of a curved, glassed corner which announces the building's entrance and retail uses. In the sponsor's opinion, this is an important element in a new building at this location and integral to the enhancement of the pedestrian visual experience. The sponsor believes that this alternative would not promote urban design policies of the Comprehensive Plan, which encourage relating to the scale and character of surrounding buildings, and reinforcing the patterns of the Retail District, as effectively as would the project.

C. ALTERNATIVE 3 - DOWNTOWN PLAN CONFORMING DESIGN

This alternative has been designed to conform to proposed controls and design guidelines for C-3 districts put forth in the Department of City Planning's Downtown Plan, published in August 1983 (see Figure 37). The Downtown Plan reduces the basic allowable FAR governing the site from 10:1 to 6:1 (the project has an FAR of 8:1). The Downtown Plan would allow an FAR in excess of the basic 6:1 (up to the maximum height and bulk limits) if the project sponsor purchased transferred development rights from eligible buildings (Category I and II historic or architecturally significant buildings, as defined in the Downtown Plan) in the same zoning district, and if he were demolishing no Category IV historic or architecturally contributory buildings on the project site. It is assumed that the Category IV ratings for three existing buildings on the site would not be changed, and that no transferred development rights would be available for this alternative. The Downtown Plan would change the Height and Bulk District to 80-130F. In this height district, buildings may have a maximum height of 130 ft; height above the 80-ft. base limit would be allowed only as a Conditional Use. New development would also be subject to maximum plan dimensions of 110 ft. in length and 140 ft. in diagonal dimension above a building height of 80 ft. Above 80 ft., this alternative would have a maximum length of 110 ft., and a maximum diagonal dimension of 140 ft. Sun access angle limitations in the Plan applicable to the project site would further require that the building have a maximum streetwall height of 66 ft. on the south side of O'Farrell St., and 65 ft. on the west side of Stockton St. The proposed Planning Code amendments to implement the Downtown Plan would permit offices offering on-site service to the public on the ground-floor in the C-3-R district if they were less than 5,000 sq. ft. in size. Those offices greater than 5,000 sq. ft. would need Conditional Use authorization. All offices on the upper floors would need Conditional Use authorization.

Larger spaces would require a Conditional Use Authorization and could be approved only upon express findings that such uses would not detract from the retail character of the area. Open space would be required in the amount of one square foot to each 100 sq. ft. of new building area in the C-3-R District, the zoning district in which the project site is located.



This alternative would contain a total of 89,560 sq. ft., including 60,060 sq. ft. of retail space on four levels (including a basement level) and 29,500 sq. ft. of office in three levels. The building would be 97 ft. tall excluding the seventh-level mechanical penthouse; a Conditional Use Authorization would be required to exceed the base 80-ft. height limit. All floors above the third (above 58 ft.) would be stepped in by about 11 ft. from the face of the floor below; the mechanical penthouse would form a hipped roof (see Figure 37). The Stockton St. frontage would be set back four feet from the property line at the ground floor, with the upper stories cantilevered over the setback. This would have the effect of widening the current 15-ft. Stockton St. sidewalk to 19 ft. Open space of about 900 sq. ft. would be incorporated as view and sun terraces, compared to about 1,600 sq. ft. in the project.

This alternative would provide about 280 jobs; retail employment would be similar to that of the project, while office employment would be reduced by about one third. Revenues and costs to serve the project would be similarly reduced.

This alternative would result in 1,370 person trips, including 100 daily automobile trips and 180 Muni trips, about 30% less than estimated project traffic and transit effects over existing levels. Additionally, this alternative would generate about 30% fewer pedestrian trips. A building setback of four feet on the Stockton St. frontage would improve pedestrian conditions on the Stockton St. sidewalk from those conditions shown in Table 12 on p. 97. The four feet of additional sidewalk space that would result from the setback of the Stockton St. facade of the project would increase the effective width of the Stockton St. sidewalk by about 35% over the existing 11.5 feet. The alternative's pedestrian travel on the Stockton St. sidewalk represents increases of from 10% (Saturday mid-afternoon) to 12% (weekday noon) of existing pedestrian volumes on the Stockton St. sidewalk. Thus, the setback would completely mitigate the impacts of the project pedestrian travel on the Stockton St. sidewalk and would additionally, mitigate an additional amount of cumulative pedestrian travel impact. The utility of the increased sidewalk space is lessened the further south it is from the corner, because the setback ends at the project's southerly property line. This would be true unless and until the setback is extended further south. Air quality effects, which are primarily caused by traffic, would be reduced over those for the project, but there would be no measurable difference in regional air quality. Energy consumption would be less than with the project. Construction effects would occur over about the same period as for the project.

Similar to the project, this alternative would necessitate demolition of three architecturally rated buildings on the site: the 65 Stockton St. Building (Leed's or Imperial Realty Building), rated "C**" by the Foundation for San Francisco's Architectural Heritage ("Heritage"), and the buildings at 55-59 Stockton St. and 107-111 O'Farrell St., both rated "C" by Heritage. All three buildings are considered to be Category IV "Contributory" buildings by the Downtown Plan. However, the Downtown Plan also states that "while preservation of contributory buildings is desirable and would be encouraged by allowing their owners to transfer unused development rights, this importance is not so great as to justify a requirement that they be retained. Therefore, demolition and replacement or substantial alteration of such buildings would be allowed."

This alternative would contribute no new shadows to any sidewalks in the project vicintiy during the hours and times year analyzed for this alternative, except for springtime afternoons, when shading of about 100 ft. of the eastern Stockton St. sidewalk south of O'Farrell St. would occur. (See Figures 30-33, below.) This alternative would not violate any of the sun access criteria of the Downtown Plan.

The sponsor has rejected this alternative because it would eliminate about 11,700 sq. ft. of revenue-producing area that would be included in the project; and because the ground-floor Stockton St. setback would eliminate 440 sq. ft. of highly valuable rentable ground-floor retail area. Also, in the sponsor's opinion, the setback would eliminate the possibility of including a rounded glass corner entrance, because additional valuable ground-floor area would be lost, and because this feature could not be accommodated in the cantilevered Stockton St. wall, which is part of this alternative. As discussed above, in the sponsor's opinion, the rounded glass entrance has a positive design effect important to the site's location and the pedestrian visual experience.

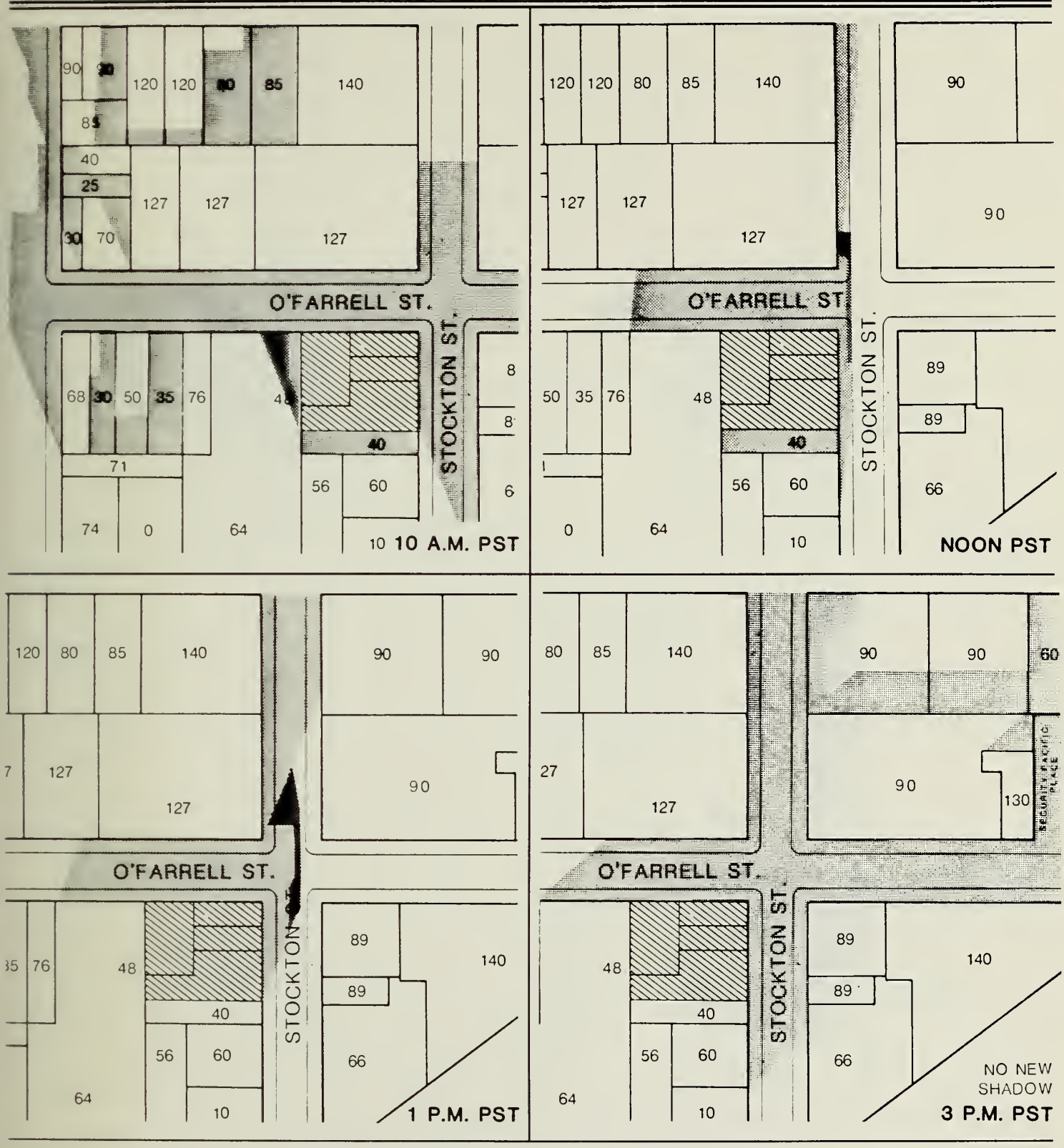
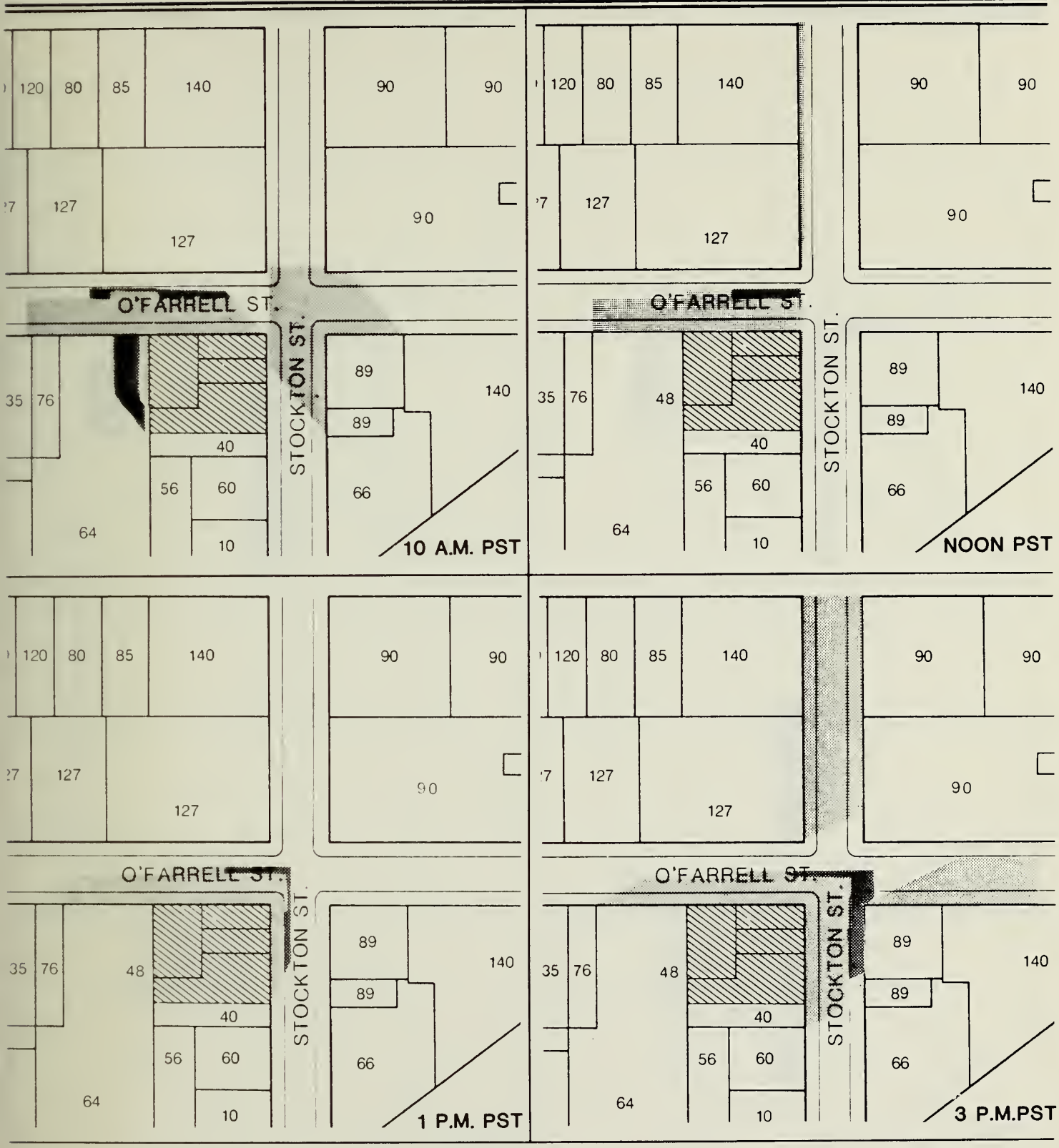


FIGURE 29
SHADOW PATTERNS IN PROJECT VICINITY
DOWNTOWN PLAN ALTERNATIVE, DECEMBER

SOURCE:
Environmental Science Associates, Inc.



SOURCE:
Environmental Science Associates, Inc.

FIGURE 30
SHADOW PATTERNS IN PROJECT VICINITY
DOWNTOWN PLAN ALTERNATIVE, MARCH

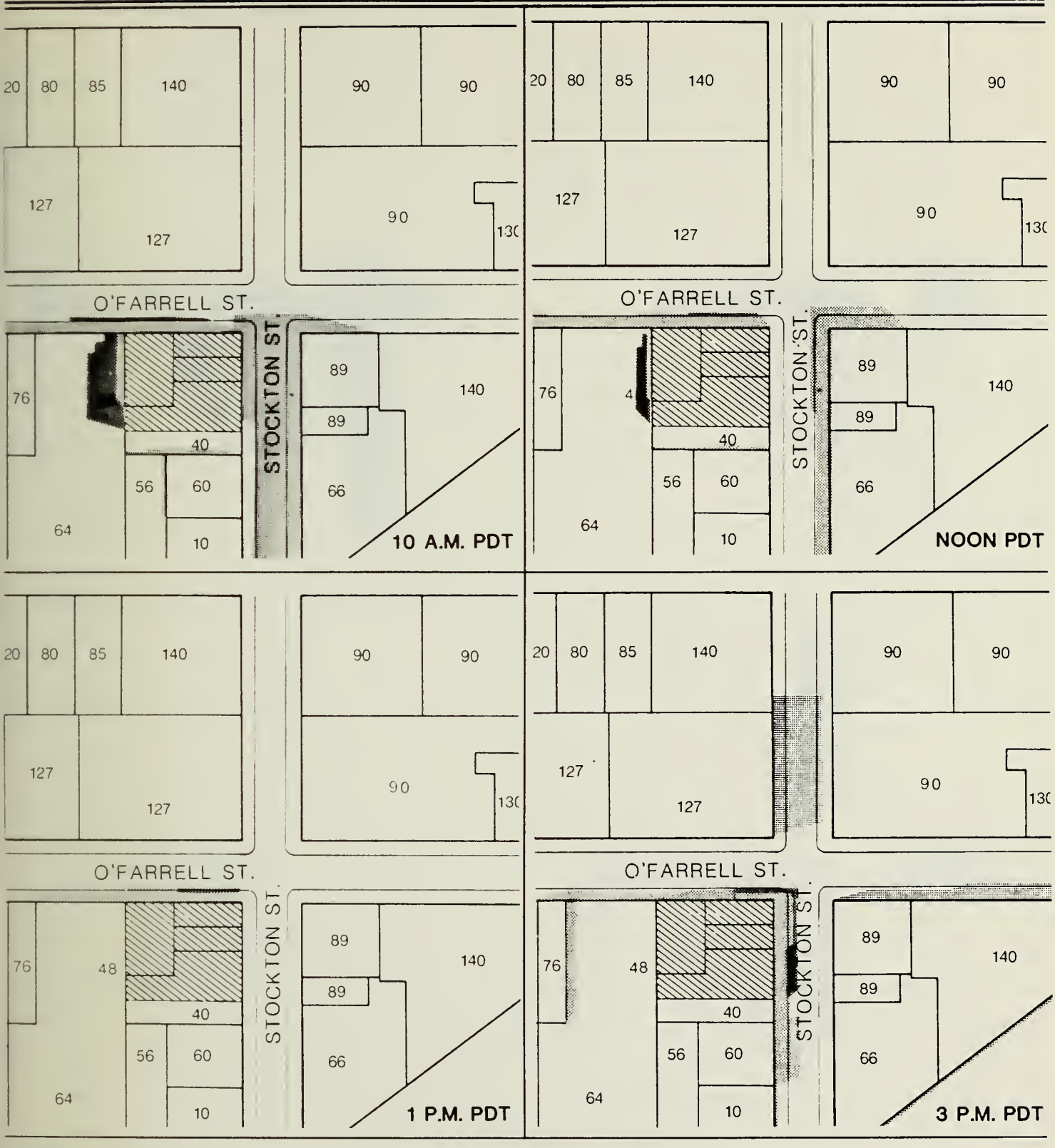


FIGURE 31

SHADOW PATTERNS IN PROJECT VICINITY

DOWNTOWN PLAN ALTERNATIVE, JUNE

SOURCE:
Environmental Science Associates, Inc.

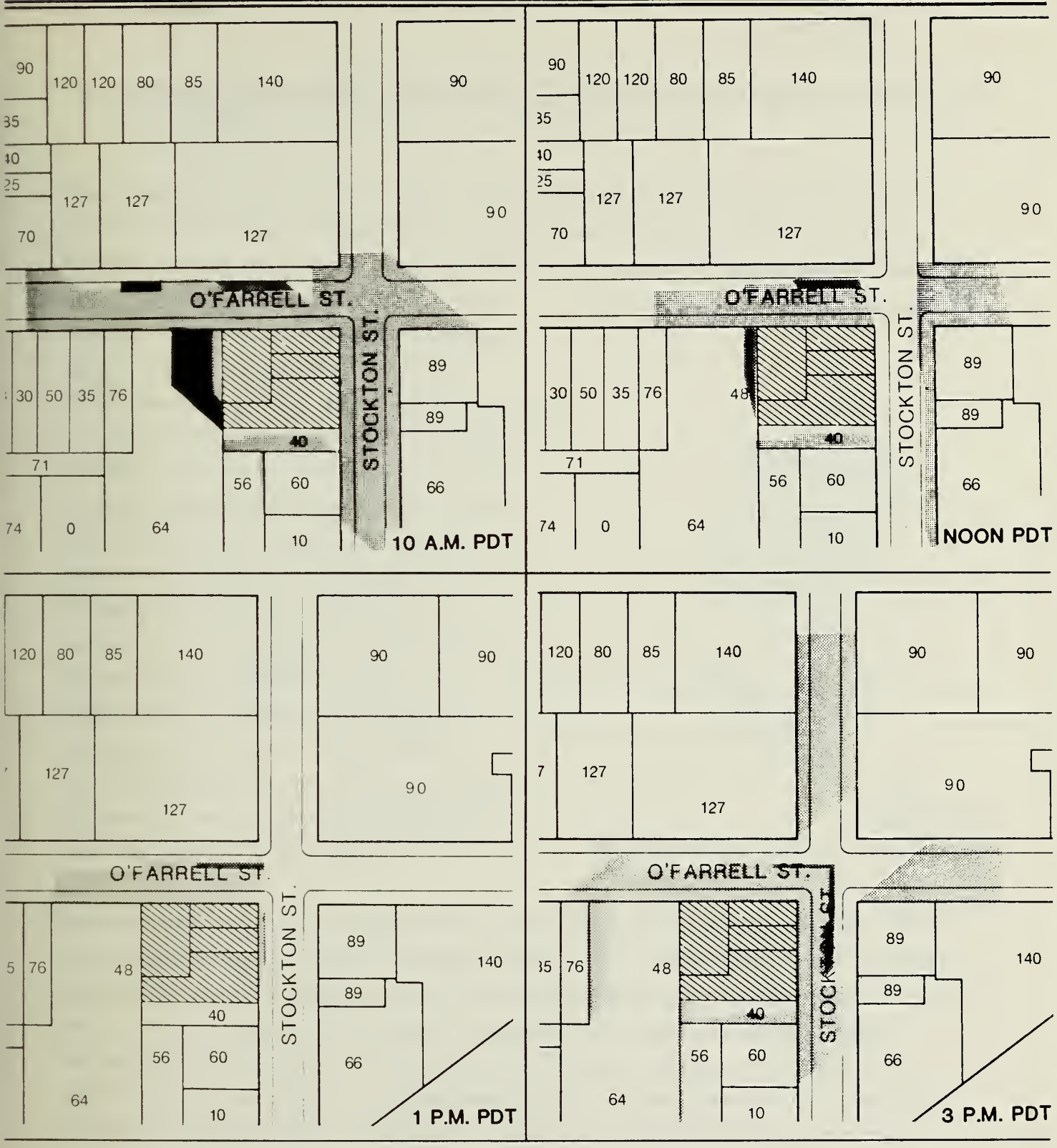


FIGURE 32

SHADOW PATTERNS IN PROJECT VICINITY

DOWNTOWN PLAN ALTERNATIVE, SEPTEMBER

SOURCE:
Environmental Science Associates, Inc.

D. ALTERNATIVE 4 - CONFORMING WITH DOWNTOWN PLAN DESIGN GUIDELINES BUT FOR TDR

This alternative would be the same as Alternative 3, except that it would incorporate additional floor area and would have similar floor area as the project; thus, it would conform with Downtown Plan design guidelines, but exceed the basic allowable floor area of 6:1. This alternative would have an FAR of about 8.42:1, with a total of 127,450 gross sq. ft. It would contain 57,650 sq. ft. of retail uses and 65,650 sq. ft. of office uses. In addition, it would contain 4,136 sq. ft. of residential area in the two top floors. The building would have a height of 130 ft., five feet more than the project, and would require a Conditional Use Authorization for the height above 80 ft. It would be ten stories tall, with stepped levels above the third floor, like Alternative 3 (see Figure 28). Each level would consist of a vertical lower part and a slanted upper part. This alternative includes the four-foot ground-floor setback along the Stockton St. sidewalk featured in Alternative 3.

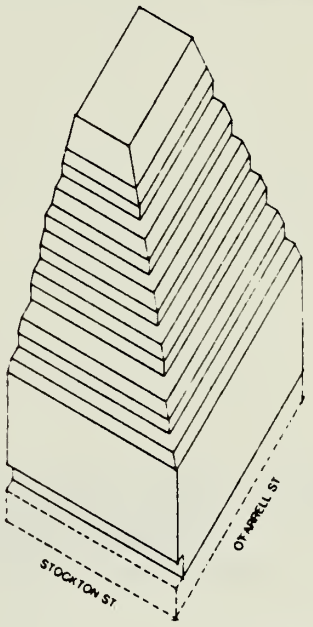


FIGURE 33
DOWNTOWN PLAN DESIGN CONFORMING ALTERNATIVE

SOURCE

Environmental effects of this alternative, except for shadow impacts, would be similar to those of the proposed project. The transportation effect of this alternative would closely resemble those of the project as daily trip generation from this alternative would be about 96% of that generated by the project. Because this alternative would have a higher percentage of office space than the project, MUNI travel and auto travel from this alternative would be about 10% higher than from the project. Shadow effects would not differ from those caused by Alternative 3, aside from barely discernable increases in shadow lengths, because of the setback arrangement of the two additional top floors. Like Alternative 3, this alternative would not violate any sun access criteria of the Downtown Plan. Because the Alternative 4 shadow impacts are not significantly different from those of Alternative 3, shadow diagrams were not included in this report. They are on file with the Department of City Planning.

This alternative has been rejected by the project sponsor, because the design of the alternative does not compliment the design of Union Square as the project does, because the ground-floor setback would reduce the rentable retail area, and, because in the sponsor's opinion, the project provides a better relationship to facing corner buildings.

VIII. EIR AUTHORS AND CONSULTANTS; ORGANIZATIONS AND PERSONS CONSULTED

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(Prime Consultant: Summary; Project Description; Zoning and Planning; Urban Design; Architectural Resources; Employment and Fiscal Factors; Transportation, Circulation and Parking; Air Quality; Energy; Growth Inducement; Mitigation Measures; Significant Environmental Effects; Alternatives to the Proposed Project; and Appendices.)

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X. APPENDICES

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APPENDIX A: INITIAL STUDY

Differences among data presented in the following Initial Study and the preceding EIR are attributable to the availability of additional and more precise data during the subsequent preparation of the EIR. Due to potential conflicts between the project and proposed guidelines in the Department of City Planning's Downtown Plan regarding sunlight access to adjacent streets, project shading effects will be discussed in the EIR.

DEPARTMENT OF CITY PLANNING 450 McAllister St. - 5th Floor
(415)558-5260

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: January 13, 1984

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister St. - 5th Floor, San Francisco CA 94102

Agency Contact Person: Jim McCormick **Tel:** (415) 558-5260

Project Title: 82.445E
Stockton/O'Farrell Mixed Use Development

Project Sponsor: Zaber Corporation, N.V.

Project Contact Person: Albert Tai

Project Address: Southwest corner of Stockton and O'Farrell Streets

Assessor's Block(s) and Lot(s): Lots 1, 2, 3, and 20 in Assessor's Block 327

City and County: San Francisco

Project Description: Demolition of four buildings. Construction of an eight-story 125-ft. tall building containing about 57,950 gross sq. ft. of retail space, 43,300 gross sq. ft. of office space, 12,450 gross sq. ft. of restaurant area, a penthouse dwelling unit of about 8,500 gross sq. ft. and two off-street loading spaces. Buildings to be demolished include 107-111 O'Farrell St., 41-51 Stockton St. 55-59 Stockton St. and 65 Stockton St.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Initial Evaluation (initial study) for the project, which is on file at the Department of City Planning:

Please see the attached Initial Study

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: _____.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a $35.00 filing fee.

Alec S. Bash

Alec S. Bash, Environmental Review Officer

INITIAL STUDY
STOCKTON/O'FARRELL MIXED USE DEVELOPMENT
82.445E
January 13, 1984

I. PROJECT DESCRIPTION

The project sponsor, Zaber Corporation, N.V., of San Francisco, proposes to construct an eight-story mixed-use development (primarily retail and office) at the southwest corner of Stockton and O'Farrell Streets. The project site occupies Lots 1, 2, 3, and 20 of Assessor's Block 327. The block is bounded by O'Farrell Street to the north, Powell Street to the west, Ellis Street to the south, and Stockton Street to the east (see Figure 1). The 15,125-sq.-ft. site is occupied by four low-rise buildings containing a variety of ground floor retail uses, with office and storage on the upper floors. The project would require the demolition of all buildings currently on the site, totalling about 29,400 sq. ft. of retail space, and 17,550 sq. ft. of office space./1/ The site is located in the Downtown Retail (C-3-R) Use District and in a 320-I Height and Bulk district. The Basic Allowable Floor Area Ratio (FAR) is 10:1, with a maximum height of 320 ft., and maximum length and diagonal dimensions above 150 ft. of 170 and 200 ft., respectively. The project architects are Kaplan/McLaughlin/Diaz and T. P. Lam Associates, AIA.

The eight-story project would be about 125 ft. tall and contain about 57,950 gross sq. ft. of retail space, 43,300 gross sq. ft. of office space, 12,450 gross sq. ft. of restaurant area and a penthouse dwelling unit of approximately 8,500 gross sq. ft. The overall project would have a gross floor area, as defined by the City Planning Code, of about 122,200 sq. ft., resulting in an FAR of about 8.1:1. Because the project would remove about 17,550 sq. ft. of office space and 29,400 sq. ft. of retail space, it would result in a net increase of about 25,750 sq. ft. of office space and 28,550 sq. ft. of retail space on the project site.

The lower basement level would be devoted to mechanical operations, a water storage tank, and building maintenance equipment. The upper basement level would contain retail uses only. Neither basement level would extend under the adjacent sidewalks. The ground floor would feature a pedestrian entrance at the corner of O'Farrell and Stockton Streets, and contain retail uses, pedestrian circulation areas and a loading dock. Escalators would lead from the ground floor to the second and third levels, which would also contain retail space. Levels four, five and six would be exclusively devoted to office space. A restaurant would be contained in level seven, and level eight would be entirely taken up by a residential penthouse. The roof level would contain mechanical equipment and air conditioning. (See Figure 2.)

As shown in Figures 2-4, the building top would be set back from both Stockton and O'Farrell Streets in two steps beginning at the seventh and eighth levels. A hipped roof would cover the eighth-level penthouse. The penthouse would be visually separated from the remaining building by a cornice. The mid-section of the building, comprised of levels three through seven, would be

in light-colored pre-cast concrete, with tinted windows. The windows would be of varying size and shape; there would be semi-circular window openings along the sixth floor, while the remaining portion of the building's mid-section would feature square window openings. The base of the building would be separated from its mid-section by another cornice. Decorative awnings would line all windows at ground level. The building design would emphasize the main pedestrian entrance at Stockton and O'Farrell Streets by replacing the light concrete cladding of the remaining building with large expanses of tinted glass. It would feature a large, rounded corner at Stockton and O'Farrell Streets. (See Figures 2-4.)

NOTES - Project Description

/1/ Zaber Corporation, N.V., letter dated, November 2, 1983.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

The proposed project is examined in this Initial Study to determine potential effects on the environment. The following potential effects have been identified as potentially significant and will be analyzed in an Environmental Impact Report (EIR) to be prepared on the project.

- Distant and near views of the project and its visual aspects;
- Relationship of the project to the Comprehensive Plan's Urban Design Element, to the objectives of the proposed Downtown Plan, and to the appearance and scale of surrounding buildings;
- Transportation impacts, both project-specific and cumulative;
- Energy consumption and conservation;
- Architectural and Historical impacts;
- Employment and fiscal effects;
- Cumulative air quality impact.

The following potential environmental impacts were determined either to be insignificant or to have been mitigated through measures included in the project. These items require no further environmental analysis and will not be addressed in the EIR:

Compatability with Existing Zoning: The proposed building conforms to the City Planning Code and would not require any variance, special authorization or change to the City Planning Code or Zoning Map (see pp. 6-7).

Land Use in the Project Vicinity: The project site is one block south of Union Square in the Union Square Hotel/Retail District. The proposed land uses for the site (with the exception of the proposed penthouse) would be the same as existing uses on the site, and would not disrupt or divide the physical arrangement of the community (see p. 7).

Reflected Light/Glare: There would be little reflected light or glare associated with the project, because nonreflective glass would be used (see p. 8).

Noise: Construction of the proposed building would have short-term effects on noise levels in the project vicinity. Construction equipment and practices would conform with applicable City ordinances and Department of Public Works recommendations to reduce noise. After completion, building operation would not perceptibly increase noise levels in the project vicinity (see p. 9).

Air Quality/Climate: Construction of the proposed building would have short-term effects on air quality in the project vicinity. The project would have minimal effect on ground-level wind speeds (see p. 11).

Public Services and Utilities: The increased demand for public services and utilities attributable to the project would not require additional personnel or equipment. Responses of the individual agencies are on file for public review at the Office of Environmental Review, 450 McAllister Street, 5th Floor (see p. 13).

Biology: The proposed project would not affect any plants or animals, as the site is completely covered by existing structures.

Geology/Topography: The project sponsor and contractor would follow the recommendations of a California-licensed soils engineer regarding building construction (see p. 14).

Water: The proposed building would increase estimated water consumption at the site by about 17,000 gallons of water per day. Drainage patterns would not be altered (see p. 15).

Hazards: The project would neither cause health hazards nor would it be affected by hazardous uses. (see p. 16).

Housing: The project would not cause a significant increase in housing demand in the City. There are no housing units currently on the site.

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS. Could the project:	YES	NO	DISCUSSED
1. Require a variance, special authorization, or change to the City Planning Code or Zoning Map?	___	X	___
*2. Conflict with the Comprehensive Plan of the City and County of San Francisco?	___	X	X
*3. Conflict with any other adopted environmental plans and goals of the City or Region?	___	X	___

* Derived from State EIR Guidelines, Appendix C, normally significant effect.

The proposed project would conform with Section 209, Article 2.5, and Section 124 of the City Planning Code, governing uses, height and bulk, and floor area ratio, respectively (see Project Description, p. 4). The proposed project would generally respond to objectives of the San Francisco Comprehensive Plan, and to the objective stated in Article 2, Section 210.3 of the City Planning Code, that the C-3-R Downtown Retail District be a regional center for comparison shopper retailing and direct consumer services. It would comply with Objective 6 of the Commerce and Industry Element of the San Francisco Comprehensive Plan which seeks to "maintain and improve San Francisco's position as a prime location for financial, administrative, corporate, and professional activity," and would respond to Policies 1 and 2 of Objective 6 to "encourage continued growth of prime downtown office activities so long as undesirable consequences of such growth can be avoided" and, to "guide location of office development to maintain a compact downtown core so as to minimize displacement of other viable uses." Furthermore, the project would be consistent with Objective 7 of the Commerce and Industry Element to improve downtown San Francisco's position as a "prime regional location for specialized retail trade", and would respond to Policies 2 and 3 of Objective 7 of the Industry and Commerce Element to "support the continued strength of high quality, specialty retail shopping facilities in the retail core" and, to encourage "shopper accessibility to the downtown area and physical design at a pedestrian scale which will enhance the pedestrian climate." These policies will not be further discussed in the EIR. The relationship of the project to the Urban Design Element of the Comprehensive Plan and to the proposed Downtown Plan will be discussed in the EIR. In addition, any specific Comprehensive Plan policies related to issues to be discussed in the EIR will be addressed in the appropriate EIR sections.

B. ENVIRONMENTAL EFFECTS. Could the project:	YES	NO	DISCUSSED
1. Land Use			
*a. Disrupt or divide the physical arrangement of an established community?	___	X	___
b. Have any substantial impact upon the existing character of the vicinity?	___	X	X

The site is in the Union Square Retail District; major department stores fronting the project site are: Macy's, Joseph Magnin's, Liberty House and Grodin's. Union Square is located one block north of the site. Land uses in the immediate vicinity of the site also include smaller retail uses, restaurants, major hotels and other department stores. Buildings on the project block are generally built to lot lines, and are one to nine stories in height. Taller buildings are located to the north, east and west. The project would provide retail space on the lower floors and office space on the upper floors. The project would be built to lot lines and be similar in height and bulk to the surrounding retail developments. Land use will not be discussed in the EIR.

---

* Derived from State EIR Guidelines, Appendix C, normally significant effect.

2. Visual Quality	YES	NO	DISCUSSED
*a. Have a substantial, demonstrable negative aesthetic effect?	___	X	___
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	___	X	___
c. Generate obtrusive light or glare substantially impacting other properties?	___	X	X

The surrounding buildings in the project area are generally low- and mid-rise. The EIR will discuss distant and near views of the project, its visual aspects, and its relationship to the appearance and scale of surrounding buildings, including architecturally rated buildings on the site (see p. 16). The windows of the proposed building would be of clear glass at street level and nonreflective, tinted glass at upper levels. The building would, in general, be constructed of textured materials, and would not cause glare.

3. Population	YES	NO	DISCUSSED
*a. Induce substantial growth or concentration of population?	___	X	X
*b. Displace a large number of people (involving either housing or employment)?	X	___	X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	___	X	X

The EIR will discuss the potential growth-inducing effects of the project and displacement of on-site businesses and employees. Construction of the project would not proceed until all present leases have expired. The proposed project would result in a net increase of approximately 25,750 sq. ft. of offices on the site. Projects containing less than 50,000 sq. ft. of office space are not subject to the City Planning Commission's Policy requiring housing by office developers. The housing demand, as calculated for Office/Housing Production Program (OHPP) is for 23 units; however, at this low number, the accuracy of the estimate is limited and does not provide a sound basis for determining a significant impact. One dwelling unit would be constructed as part of the project. Housing will not be discussed in the EIR.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

4. Transportation/Circulation	YES	NO	DISCUSSED
*a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	X		X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?		X	X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	X		X
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	X		

Increased employment and retail customer traffic at the building site would increase demand on existing transportation systems. The number of pedestrians in the area would increase. The project would not cause alterations to existing circulation patterns, but would incrementally affect local street and sidewalk levels of service. Project-related impacts and cumulative transportation, parking and circulation impacts will be analyzed and described in the EIR.

5. Noise	YES	NO	DISCUSSED
*a. Increase substantially the ambient noise levels for adjoining areas?		X	X
b. Violate Title 25 Noise Insulation Standards, if applicable?		X	X
c. Be substantially impacted by existing noise levels?		X	

Demolition, excavation and building construction would temporarily increase noise in the site vicinity for about 15 months. There would be no pile-driving required for the foundation of the building. Typical noise levels at 50 ft. from construction sites range from 75 dBA/1/ to 89 dBA./2/ Noise at such levels would be disruptive to workers and residents in nearby buildings. Noise from non-impact tools and equipment would comply with the San Francisco Noise Ordinance requirement, under Section 2907(b), for a maximum sound level no higher than 80 dBA, at a distance of 100 ft. from the property line. Any impact tools and equipment needed for demolition would have intake and exhaust mufflers, and jackhammers would be equipped with shields or shrouds recommended by the manufacturers and approved by the Director of Public Works (Section 2907(c) of the Noise Ordinance). Holes for temporary soldier piles

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

(used to support excavation walls) would be pre-drilled, to minimize use of impact equipment. No construction activity, which would cause the noise level to exceed the ambient noise level by five dBA at the nearest property line, would be allowed between 8 p.m. and 7 a.m. The contractor would also construct barriers around the site and around stationary equipment, such as compressors, which would reduce street-level demolition noise by as much as five dBA. Construction noise will not be discussed in the EIR.

The downtown San Francisco noise environment is dominated by vehicular traffic noise. Traffic generated by the project would increase traffic noise by less than 1 dBA. A 1-dBA increase in environmental noise is imperceptible to the untrained human ear.

The Environmental Protection Element of the Comprehensive Plan indicates an existing day-night average noise level (Ldn)/3/ of 70 dBA/1/ on Stockton and O'Farrell Sts. A noise measurement made by the consultant at the corner of Stockton and O'Farrell Sts. indicates an Ldn of about 73 dBA./4/ The Environmental Protection Element contains guidelines for determining the compatibilty of land uses with various noise environments. For retail and office uses, the guidelines recommend that in areas where the Ldn is about 70 dBA or greater, a detailed analysis of noise reduction requirements be made, and needed noise insulation features be included in project design. Title 25 of the California Administrative Code, Noise Insulation Standards, applies to all new residential units. The acceptable exterior noise level for residential units is a Community Noise Equivalent Level (CNEL)/5/ of 60 dBA. The exterior noise environment of the site exceeds 60 dBA CNEL at street level. The residential penthouse would be located on the eighth floor. The project would require an acoustical analysis to show that the maximum interior noise level would be 45 dBA with windows closed. Compliance with Title 25 would insure that interior noise levels are reduced to an acceptable level. The project sponsor has acknowledged that the project would be constructed to conform with both the Title 25 Noise Insulation Standards and San Francisco Environmental Protection Element, so no further analysis of interior noise levels is needed in the EIR. Mechanical equipment for building operation would be regulated by San Francisco Noise Ordinance 2909, which limits noise at the property line to 70 dBA from 7 a.m. to 10 p.m. and 60 dBA from 10 p.m. to 7 a.m. Further discussion of operational noise will not be included in the EIR.

NOTES - Noise

/1/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the responses of the human ear to various frequencies of sound.

/2/ Alfredson, Robin J., and D. N. May, "Construction Site Noise," Handbook of Noise Assessment, 1978.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

/3/ L_{dn}, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

/4/ Based on a 15-minute evening peak period measurement at 5:25 p.m. on Thursday, December 8, 1983. The energy equivalent Level (Leq) for this measurement was 73 dBA.
/5/ CNEL, the Community Noise Equivalent Level, is a 24-hour noise measurement similar to Ldn. Noise between 7 p.m. and 10 p.m. is weighted 5 dBA higher than daytime noise. Noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

6. Air Quality/Climate	YES	NO	DISCUSSED
*a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	X		X
*b. Expose sensitive receptors to substantial pollutant concentrations?		X	
c. Permeate its vicinity with objectionable odors?		X	
d. Alter wind, moisture or temperature (including sun shading effects), so as to substantially affect public areas, or change the climate either in the community or the region?		X	X

Air quality data collected by the Bay Area Air Quality Management District show that San Francisco experiences infrequent violations of the ambient air quality standards for carbon monoxide (CO) and total suspended particulates (TSP). Climatic conditions in San Francisco allow rapid dispersal of air pollutants, so that local stationary sources of emissions rarely create a measurable impact at monitoring stations. Rather, their impact is to add to regional accumulations of pollutants.

Two types of air quality effects could be expected from the proposed building: short-term effects from construction activity, and long-term impacts related to use and operation of the structure. Construction activities would temporarily affect local air quality. Dust emissions during demolition and excavation would increase particulate concentrations adjacent to the site. Dustfall can be expected at times on surfaces within 200 to 400 ft. of the site under low winds. Under high winds, discomfort may occur downwind from blowing dust.

The project sponsor has agreed to mitigation measures to reduce particulate emissions generated during construction activities (see p. 17). Construction air quality effects will not be discussed in the EIR.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

Annual emissions from building operation (natural gas combustion for heating, cooking, water heating) would represent less than five percent of total project-related emissions. Traffic generated by the proposed building would produce the primary (over 95%) air quality impact from the project, and would incrementally degrade air quality. Project-generated traffic would incrementally contribute to cumulative downtown San Francisco emissions of carbon monoxide, hydrocarbons, nitrogen oxides, sulfur oxides and particulates. Cumulative project effects on air quality will be discussed in the EIR.

The potential for adverse wind accelerations at ground level is determined by two factors: site exposure and design. In San Francisco, buildings that are known to cause uncomfortable wind conditions have the following characteristics: 1) they are freestanding and exposed to prevailing winds; 2) they have wide, continuous west faces; 3) they extend well above surrounding buildings.

The proposed project does not have these characteristics. Only the set-back upper two stories (the seventh and eighth floors) of the building would extend above surrounding structures. The building's narrow axis is oriented into west winds (the prevailing winds), and the west facade is broken by two set-backs from the O'Farrell Street frontage. With this configuration, any wind accelerations caused by the building would be elevated well above pedestrian level by the the presence of adjacent structures. The O'Farrell Street set-backs would not be sheltered and could be windy, however, wind protection such as screens, windows, vegetation, or similar enclosure would ensure usability of these terraces. The Stockton Street set-backs would be protected. A certified consulting meteorologist has found that a wind tunnel analysis will not be necessary for the project./1/ This issue will not be discussed in the EIR.

Buildings in the project area are low- and mid-rise retail, hotel, and office buildings. The proposed building could increase shadows on the sidewalks and structures near the project, but would not shade Union Square or any other open spaces at any time of the year. Shadow diagrams have been prepared for the project, and are available for public review at the Office of Environmental Review, 450 McAllister Street, Fifth Floor, San Francisco. The following shadow patterns would be caused by the proposed project:

MORNINGS (10 a.m.) The project would not add any new shadows to adjacent streets or building frontages during the winter months. During the spring and fall months, the project would cast new shadows on the sidewalk along the northern side of O'Farrell St. Ground-floor window awnings on the Macy's building currently shade portions of this sidewalk; the effects of new shading due to the project would be diminished somewhat by these awnings. The project would cast a very small amount of new shadow on the southern side of O'Farrell St. during the summer months.

NOON During the winter months, the project would add a small amount of new shadow to the western side of Stockton Street, most of which would not cover any sidewalks not already covered by existing shadow. The sidewalk along the northern side of O'Farrell St. would be shaded by the project for about 150 ft. during the spring and fall months. As noted above, the presence of Macy's ground-floor awnings would somewhat diminish these effects. The project would contribute a minimal increase in building shadows along the southern side of O'Farrell St. during the summer months.

AFTERNOONS (3:00 p.m.) During the winter months, the new building would not cast new shadows. During spring and fall, the project would cast new shadows on the sidewalks along the northern side of O'Farrell Street (where not already shaded by the Macy's ground-floor awnings), to both sides of the Stockton/O'Farrell intersection, and to the sidewalks along the eastern side of Stockton Street. The project would add some new shadows to Stockton St. during the summer months.

NOTES - Air Quality/Climate

/1/ Donald Ballanti, Certified Consulting Metereologist, letter, November 1, 1983. The letter is available for public review at the Office of Environmental Review, 450 McAllister Street, Fifth Floor.

7. Utilities/Public Services	YES	NO	DISCUSSED
*a. Breach published national, state or local standards relating to solid waste or litter control?	___	X	___
*b. Extend a sewer trunk line with capacity to serve new development?	___	X	___
c. Substantially increase demand for schools, recreation or other public facilities?	___	X	___
d. Require major expansion of power, water, or communications facilities?	___	X	X

The project's internal security features would include a security desk in the lobby area and a closed-circuit TV monitoring system of the loading docks. A dumpster and storage area would be provided for recycled materials. The providers of utilities and public services have been contacted. PG&E has indicated that new facilities may be necessary to provide gas service to the proposed project. The project sponsor will provide all applicable service connection activities cannot be determined at this time. All other utilities have indicated that they have adequate capacity to serve the project and would not require additional personnel or equipment. Statements to this effect from these service providers are available for public review at the Office of Environmental Review, 450 McAllister St., Fifth Floor. No further analysis is necessary in the EIR.

8. Biology	YES	NO	DISCUSSED
*a. Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	___	X	___

* Derived from State EIR Guidelines, Appendix C, normally significant effect.

*b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?		X	
c. Require removal of substantial numbers of mature, scenic trees?		X	

The site is completely covered with existing structures. The project would not affect any plant or animal habitat. This topic will not be discussed in the EIR.

9. Geology/Topography	YES	NO	DISCUSSED
*a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?		X	X
b. Change substantially the topography or any unique geologic or physical feature of the site?		X	X

Available geologic maps of the area indicate that the site is underlain by dune sand consisting of clean, well-sorted fine- to medium-grained sand. The site is not located in an area of major liquefaction or subsidence potential. Groundshaking is expected to be "strong" on the site for an earthquake of the 1906 type. There is no tsunami inundation potential./1/

Excavation to a projected depth of 32 feet would be necessary for project construction. About 17,100 cubic yards of material would be removed from the site during the nine-week excavation period. In order to obtain a building permit from the Bureau of Building Inspection, the project sponsor would obtain a site-specific soils report from a licensed soils engineer, and has agreed to construct the building in accordance with the recommendations of the soils report with regard to foundation and structure (see mitigation measures on p. 18). The project would comply with the Life Safety Provisions of the San Francisco Building Code. The building's exterior concrete panels would be bolted to the structure's steel frame. The bolts would be designed to absorb the shock of a major earthquake. Windows would be installed in "compensation channels". These would allow the windows and glazing to "float" in the channels and be cushioned from earthquake stresses. These issues will not be discussed in the EIR.

NOTE - Geology/Topography

/1/ San Francisco Seismic Safety Investigation, J.A. Blume and Associates, 1974.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

10. Water	YES	NO	DISCUSSED
*a. Substantially degrade water quality, or contaminate a public water supply?	___	X	X
*b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	X	X
*c. Cause substantial flooding, erosion or siltation?	___	X	___

The project would not affect drainage patterns or water quality because the site is now entirely covered with impermeable surfaces. The proposed building would increase domestic water use on the site to an estimated 17,000 gallons per day (gpd).

As discussed above, excavation would be required to an anticipated depth of about 32 feet for the proposed subsurface levels. Borings performed at nearby sites indicated that the ground water level varied from about 20 ft. to about 60 ft. Some of these observations indicated that ground water might be pooling in pockets near the surface, while the permanent water table might occur in lower sand at a depth of about 57 ft. Should one of these ground water pockets occur at the site, minimal dewatering might be necessary. Dewatering would be performed with sump pumps. Shoring of the excavation would be performed with steel piling and wood lagging. All holes for temporary shoring piles would be pre-drilled. There would be no foundation pile-driving; a mat foundation would be used.

Dewatering over extended periods of time could cause a general lowering of the water level in the project area, which in turn could lead to subsidence and material stresses for the surrounding buildings and streets. Should dewatering be necessary, the hydrostatic level would be lowered only sufficiently and long enough for completion of the basement. The groundwater level outside the excavation would be monitored during dewatering, using groundwater observation wells. Water levels in the fill soils would be monitored closely before, during, and after dewatering, both inside and outside the excavation, to assess the adequacy of construction dewatering, effectiveness of ground water stabilization outside the excavation, and ground water recovery subsequent to dewatering (see mitigation measures on p. 18). This will not be discussed in the EIR.

11. Energy/Natural Resources	YES	NO	DISCUSSED
*a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	___	X	X
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	___	X	X

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

The proposed building would increase the total amount of energy consumed at the site and would contribute marginally to cumulative downtown San Francisco energy consumption. Energy consumption and conservation will be discussed in the EIR.

12. Hazards	YES	NO	DISCUSSED
*a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	X	___
*b. Interfere with emergency response plans or emergency evacuation plans?	___	X	X
c. Create a potentially substantial fire hazard?	___	X	___

The proposed building would result in a greater number of people on the site, which would increase the difficulty of evacuating people from the site in an emergency. The hazard mitigation measure committed to by the project sponsor would mitigate this impact (see p. 18). The building would conform to Life Safety Provisions of the San Francisco Building Code requiring sprinklers, emergency on-site water storage and generators. No further analysis is necessary in the EIR.

13. Cultural	YES	NO	DISCUSSED
*a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	___	X	X
*b. Conflict with established recreational, educational, religious or scientific uses of the area?	___	X	___
c. Conflict with preservation of any buildings of City landmark quality?	X	___	X

The project would require demolition of one building rated "B" and two buildings rated "C" by the Foundation for San Francisco's Architectural Heritage, Splendid Survivors survey. These buildings are referenced in the proposed Downtown Plan as "contributory to the quality and character of downtown San Francisco." Cultural and historic resources on the project site and in the project vicinity will be analyzed in the EIR.

The excavation required for the construction of foundations would occur in existing dune sand soils and the potential for encountering archaeological resources during construction would be limited./1/ While a major

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

archaeological discovery is unlikely, should any artifacts be discovered during site excavation, the project sponsor is committed to the mitigation measure on p. 18 regarding archaeological resources. Archaeological resources will not be discussed in the EIR.

NOTE - Cultural

/1/ San Francisco: Report On Historical Cultural Resources. Olmstead, Roger and Nancy; Pastron, Allen.

C. OTHER	YES	NO	DISCUSSED
Require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies?		X	

D. MITIGATION MEASURES	YES	NO	N/A	DISCUSSED
1. If any significant effects have been identified, are there ways to mitigate them?	X			X
2. Are all mitigation measures identified below included in the project?	X			X

Mitigation measures currently proposed as part of the project are listed below. Other mitigation measures may be identified during subsequent environmental review and will be included in the EIR.

Visual Quality

- In order to reduce obtrusive light or glare, the project sponsor would use nonreflective glass on all parts of the building.

Noise

- The project sponsor would require the contractor, through an agreement in the construction contract, to muffle construction equipment. Any impact tools and equipment needed for construction would have intake and exhaust mufflers, and jackhammers would be equipped with shields or shrouds recommended by the manufacturers and approved by the Director of Public Works (Section 2907(c) of the Noise Ordinance). The contractor would also construct barriers around the site and around stationary equipment, such as compressors. Holes for temporary shoring piles would be pre-drilled.

Air Quality

- During construction, the project sponsor would require the general contractor to wet down demolition and construction areas at least twice a day to reduce dust generation by approximately 50%.

Geology/Topography

- A preliminary geotechnical report has been prepared by a California-licensed engineer for the project sponsor. A final report would be prepared before commencement of construction. The project sponsor and contractor would follow recommendations made in that report regarding construction of the proposed building.

Water

- Should dewatering be necessary, the final soils report shall address the potential settlement and subsidence impacts of dewatering of the site. Based upon this discussion, the soils report shall contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works will require that a Special Inspector (as defined in Article 3 of the Building Code) will be retained by the project sponsor to perform this monitoring. If, in the judgement of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service under the street would be borne by the contractor.

- Groundwater pumped from the site during dewatering would be retained in a holding tank to allow suspended particles to settle (if this were found necessary by the Industrial Waste Division of the Department of Public Works) to prevent sediment from entering the storm drain/sewer lines. Excavation would be performed mainly during the summer months, when the groundwater level can be expected to be relatively low.

Hazards

- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the plan developed for the proposed building. The emergency plan for the proposed building would be reviewed by the Office of Emergency Services and implemented by building management insofar as possible before issuance by the Department of Public Works of final building occupancy permits.

Cultural

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

E. MANDATORY FINDINGS OF SIGNIFICANCE	YES	NO	DISCUSSED
*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	___	X	___
*2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
*3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	X	___	X
*4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	X	___
*5. Is there a serious public controversy concerning the possible environmental effect of the project?	___	X	___

The project could contribute to cumulative effects on traffic in the Downtown area. This will be analyzed in the EIR.

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* Derived from State EIR Guidelines, Appendix C, normally significant effect.

F. ON THE BASIS OF THIS INITIAL STUDY:

____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers ____ in the discussion, have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

__X__ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Alec S. Bash
Environmental Review Officer

for

Dean L. Macris
Director of Planning

Date: January 12, 1984

APPENDIX B: ARCHITECTURAL RESOURCES

ARCHITECTURAL EVALUATION SURVEYS

The architectural ratings discussed in the text of this report (see Section III. C., p. ***, represent the results of two separate architectural surveys.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, the results of which were entered in an unpublished 60-volume record of the inventory. The rated buildings are also represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The inventory and maps are on file at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was numerically rated according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best 2% of the City's architecture.

HERITAGE SURVEY

The Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the original inventory results were published in the book Splendid Survivors (Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, San Francisco, 1979). A subsequent 1982 Heritage survey evaluated all structures in the C-3 zoning districts in areas not covered in the Splendid Survivors survey ("San Francisco Downtown Architectural Survey: C-3 Zoning District, Final Evaluated List", December 1, 1982). The expanded inventory has not been formally published by Heritage. Criteria considered in rating the buildings for both surveys include Architectural Significance, Historic Context and Negative Alterations. Summary ratings from "A" to "D" were assigned to each building on the basis of these scores. The summary ratings, as described on pp. 12-13 of Splendid Survivors, are listed below:

A. "Highest Importance. Individually the most important buildings in downtown San Francisco, distinguished by outstanding qualities of architecture, historical values, and relationship to the environment. All A-group buildings are eligible for the National Register, and of highest priority for City Landmark status."

B. "Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. These buildings tend to stand out for their overall quality rather than for any particular outstanding characteristics. B-group buildings are eligible for the National Register, and of secondary priority for City Landmark status."

The Landmarks Preservation Advisory Board does not distinguish between "A" rated and "B" rated buildings for purposes of preservation.

C. "Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. They provide the setting for more important buildings and they add visual richness and character to the downtown area. Many C-group buildings may be eligible for the National Register as part of historic districts."

D. "Minor or No Importance. Buildings which are insignificant examples of architecture by virtue of original design, or more frequently, insensitive remodeling. This category includes vacant buildings and parking lots. Most D-group buildings are sites of opportunity."

Not Rated. Buildings which have been built or suffered insensitive exterior remodelings since 1945.

ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

The City Planning Commission adopted by Resolution No. 8600 (May 29, 1980), a "List of Architecturally and/or Historically Significant Buildings in The Downtown," based on the above described surveys. Generally, buildings rated "3" or higher in the DCP survey or "A" or "B" in the original Heritage survey (Splendid Survivors) were placed on the list. The expanded Heritage survey (1982) has not been adopted by the City Planning Commission to date.

The purpose of the list is to advise developers and building owners of the importance the City places upon the buildings' conservation and to require special review by the Commission of any plans which would affect any building or buildings on the list. Resolution No. 9240 (November 19, 1981) reaffirms the Commission's concern for preservation of architecturally significant buildings and acknowledges the Director's intent to recommend denial of projects that propose to demolish significant buildings. As noted in Section III.B., the Imperial Realty building at 65 Stockton St. is included on this list.

APPENDIX C: EMPLOYMENT AND FISCAL FACTORS

REVIEWERS PLEASE NOTE THAT APPENDIX WILL CHANGE WITH NEW INFORMATION ON CUMULATIVE ANALYSIS.

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982, IN GROSS SQUARE FEET

Year	Total Gross Sq. Ft. Completed	5-Year Total (Net)/a/	5-Year Annual Average (Net)/a/	Cumulative Total of All Office Buildings	Cumulative Total of All Downtown Office Buildings
Pre-1960			28,145,000/b/	24,175,000/c/	
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
	2,866,000	573,200			
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
	8,379,000	1,675,800			
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
	8,615,000	1,723,000			
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
	8,157,000	1,631,400			
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
1982	3,771,000	8,084,000/d/	2,694,700/d/		
1980-1982		(7,275,600)/d/	(2,425,200)/d/	60,635,600	59,559,600

(Continued)

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982, IN GROSS SQUARE FEET (Continued)

/a/ Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.
/b/ Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.
/c/ Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin St. is included.
/d/ Three-year total and average.

SOURCE: Department of City Planning, March 15, 1983.

TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984

Block	Case No.	Project Name	Office (Gross Sq. Ft.) Total New Constr.	Office (Gross Sq. Ft.) Net New Constr.	Retail (Gross Sq. Ft.) Total New Constr.	Retail (Gross Sq. Ft.) Net New Constr.
		Downtown Office Projects Under Formal Review				
59	83.177E	1620 Montgomery	82,270	45,390		
110	82.129E	1000 Front	139,000	139,000	3,000	3,000
112	83.447E	1100 Sansome	55,000	48,000		
113	8264603	1171 Sansome	30,000	30,000		
113	82.418E	220 Green	3,520	3,520		
130	83.612C	1558 Powell	2,500	2,500		
136	83.476V	962 Battery	15,000	15,000		
192	83.412ED	1055 Stockton			81,500	66,500
194	83.128E	732 Washington	17,500	17,500	11,240	11,240
195	82.643E	660 Washington	3,938	3,938		
227	82.463E	505 Montgomery	327,300	300,670	12,100	-4,775
228	83.422E	560 Sacramento	48,000	31,000		
229	83.222EC	Embarcadero West	575,000	382,000	9,000	9,000
236	82.511E	222 Front	40,250	33,400	3,250	-0-
258	82.421E	Pine/Kearny	186,000	186,000	6,750	6,750
266	83.420ED	98 Battery	169,000	106,500		
267	83.421ED	225 Pine	134,000	134,000		
287	83.91ED	237 Kearny/Bush	99,600	87,800	6,100	2,400
288	83.148E	665 Bush (M)	12,400	2,600		-2,700
309	83.333E	212 Stockton	32,220	15,885	21,700	16,200
326	8312187	156 Ellis	3,200	3,200		
327	82.445E	Stockton/O'Farrell	43,300	25,750	57,950	28,000
331	81.448E	Mixed Use Development	50,000	50,000	70,000	49,000
336	83.21ECV	440 Turk	25,000	8,150		
642	83.218V	1699 Van Ness	20,000	20,000		
814	81.540E	101 Hayes	132,000	132,000	6,000	6,000
3526	83.475V	530-550 9th	42,300	42,300		
3702	83.196E	1169 Market, Trinity	820,000	805,000	40,000	40,000
3704	83.404	901 Market Penney's	145,500	126,000	80,000	80,000
3705	83.314E	5th and Market	880,000	778,000	120,000	40,000
3707	SFRA	YBC Office Bldg.	593,000	593,000		
3708	81.297ED	562 Mission	405,000	265,000	10,000	10,000
3708	83.75E	49 Stevenson	169,600	136,900	9,800	-2,900
3721	83.331E	100 First @ Mission	348,920	342,000		
3721	83.40EZD	524 Howard	279,000	279,000	15,000	15,000
3735	83.313E	35 Hawthorne	47,400	47,400	2,900	2,900
3736	83.311E	299 2nd @ Folsom	206,000	171,000	10,000	10,000
3744	84.41E	Hills Bros.	635,000	535,000	40,000	40,000

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TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office (Gross Sq. Ft.) Total New Constr.	Office (Gross Sq. Ft.) Net New Constr.	Retail (Gross Sq. Ft.) Total New Constr.	Retail (Gross Sq. Ft.) Net New Constr.
		Downtown Office Projects Under Formal Review				
3749	83.464EV	50 Guy Place	17,500	17,500		
3752	83.310E	837 Folsom	200,000	200,000		
3769	83.213EV	59 Harrison	113,500	49,750		
3776	83.451E	501 Bryant	67,000	35,000	14,000	4,000
3778	83.547E	775 Bryant	27,890	27,890	3,675	3,675
3786	82.33E	655 5th/Townsend	126,250	126,250		
3786	83.272EV	525 Brannan	13,500	13,500		
3788	82.352EV	640 2nd	39,100	37,400		
3789	82.31EV	615 2nd/Brannan (C)	90,000	70,000	9,300	9,300
3794	83.545V	139 Townsend	51,200	50,000		
3923	81.491EVF	1550 Bryant	80,600	49,600		
-	SFRA	Yerba Buena Gardens	1,340,000	1,340,000		
-	SFRA	Rincon Point/S. Beach	760,000	760,000		
TOTAL UNDER FORMAL REVIEW			9,744,260	8,721,295	643,265	442,590
		Major Downtown Office Projects; Approved, Not Yet Under Construction				
65	82.168V	990 Columbus	12,000	12,000		
112	81.258	Ice House (C)	209,000	209,000		
164	81.583D	50 Osgood Place	22,500	22,500	9,100	9,100
176	83.229E	801 Montgomery	31,800	31,800	6,200	6,200
176	82.368E	900 Kearny	25,000	25,000	5,000	5,000
225	81.403ED	814 Stockton	3,500	3,500	3,300	3,300
265	81.195ED	388 Market at Pine (M)	234,500	85,500	10,000	-8,500
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000
271	83.13E	582 Bush	18,100	18,100	800	800
288	81.687ED	222 Kearny/Sutter	150,000	49,950	10,000	-8,400
294	82.87D	44 Campton Place	7,600	7,600		
642	82.224VEC	1750 California	82,525	82,525		
669	81.667ED	1361 Bush	13,000	13,000		
671	82.24V	1581 Bush (C)	16,000	16,000		
690	SFRA	Post/Van Ness	88,000	88,000		
716	81.581ED	Polk/O'Farrell (M)	61,600	61,600	22,400	22,400
818	83.94EV	583-591 Hayes (C)	4,900	4,900		
3504	82.137V	44 Gough (C)	30,000	30,000		

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TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office (Gross Sq. Ft.) Total New Constr.	Office (Gross Sq. Ft.) Net New Constr.	Retail (Gross Sq. Ft.) Total New Constr.	Retail (Gross Sq. Ft.) Net New Constr.
		Major Downtown Office Projects; Approved, Not Yet Under Construction				
3702	81.549ED	1145 Market	137,500	108,500	8,000	8,000
3705	80.315	Apparel Mart III	332,400	332,400		
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350
3707	81.245DA	New Montgomery Pl.	227,500	209,700	2,200	-3,900
3708	81.493ED	71 Stevenson	324,600	324,600	6,200	6,200
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400
3717	81.183E	123 Mission	342,800	342,800		
3724	81.102E	Holland Ct. (C)	27,850	27,850		
3729	82.86D	774 Tehama	5,800	5,800		
3733	EE81.2	868 Folsom	65,000	65,000		
3733	82.29E	832 Folsom	50,000	50,000		
3735	SFRA	75 Hawthorne (C)	61,900	61,900		
3738	DR80.5	315 Howard	294,000	294,000	3,200	3,200
3749	EE81.18	Marathon - 2nd & Folsom	686,700	686,700	35,300	35,300
3750	82.241E	600 Harrison	228,000	228,000	10,000	10,000
3750	82.77V	642 Harrison (C)	54,400	45,900		
3764	82.591E	Second St. Sq. (C)*	333,000	263,000	25,000	25,000
3775	81.147V	338-340 Brannan (C)	36,000	36,000		
3776	EE81.59	Welsh Commons (M)	55,600	55,600	12,000	12,000
3788	81.296Z	690 2nd/Townsend (C)	16,600	16,600	16,000	16,000
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000		
3794	81.569EV	123 Townsend	104,000	49,500		
3794		155 Towsend	19,000	19,000		
3803	81.244D	China Basin Expansion	196,000	196,000		
9900	81.63E	Ferry Building Rehab.	309,500	97,500	163,500	124,000
TOTAL APPROVED			5,658,275	4,760,625	376,950	294,450
		Major Downtown Office Projects Under Construction				
58	82.234E	Roundhouse (C)	45,000	45,000	3,000	3,000
136	81.243E	955 Front/55 Green	50,000	50,000		
143	81.353ED	1000 Montgomery (C)	39,000	39,000		
146	83.99EC	644 Broadway	42,800	42,800		
161	DR80.191	Mirawa Center	36,000	36,000	30,650	30,650
166	DR80.15	750 Battery	105,400	105,400	12,800	12,800
166	CU81.7	222 Pacific at Front (C)	142,000	142,000		

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TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office (Gross Sq. Ft.) Total New Constr.	Office (Gross Sq. Ft.) Net New Constr.	Retail (Gross Sq. Ft.) Total New Constr.	Retail (Gross Sq. Ft.) Net New Constr.
		Major Downtown Office Projects Under Construction				
167	SFRA	Golden Gateway III	103,000	103,000		
176	81.673EACV	Columbus/Pacific (Savoy)	49,000	49,000	22,000	22,000
208	81.104EDC	Washington/Montg. (M)	235,000	233,300	4,000	-1,200
227	EE80.296	Bank of Canton	230,500	177,500		-800
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500
261	81.249ECQ	345 California (M)	640,000	466,500	15,500	15,500
262	81.206D	130 Battery	41,000	41,000		
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200
271	81.517	453 Grant	27,500	27,500	6,200	6,200
288	81.461EC	333 Bush (Campeau) (M)	498,400	458,100	20,900	20,900
288	DR80.24	101 Montgomery	264,000	234,000	4,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
311	82.120D	S.F. Federal	246,800	218,850	1,600	-9,440
351	DR79.24	Mardikian/1170 Market	40,000	40,000		
641	82.200CV	1735 Franklin (C)	8,600	8,600		
672	SFRA	Wealth Investments	104,500	104,500		
743	SFRA	Van Ness/Turk (Vanguard)	85,000	85,000		
767	STATE	State Office Building	293,300	293,300		
816	82.212ED	300-350 Gough (M/C)	16,000	16,000		
834	82.603E	25 Van Ness (C)	101,800	42,800	36,400	36,400
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000
3715	82.16EC	121 Steuart	33,200	33,200		
3715		141 Steuart	80,000	80,000		
3717	EE79.236	101 Mission	219,350	219,350		
3717	EE80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3722	81.417ED	144 Second at Minna	30,000	30,000		
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200
3787	81.306	252 Townsend at Lusk	61,000	61,000		
TOTAL UNDER CONSTRUCTION			5,985,900	5,530,950	226,300	184,660
GRAND TOTAL (ALL PROJECTS)			21,388,430	19,012,870	1,246,515	921,700

* (C) - Conversion (generally industrial and/or warehouse to office)
(M) - Mixed Use (office/residential/commercial)

SOURCE: Department of City Planning

TABLE C-3: SUMMARY OF RECENT STUDIES ON FISCAL IMPACTS OF DOWNTOWN DEVELOPMENT

STUDY, AUTHOR, DATE	PURPOSE OF STUDY	DATA SOURCES	STUDY METHODOLOGY	CONCLUSIONS
"Fiscal Concerns" in Downtown San Francisco Conservation and Development Planning Program, Phase I Study, Sedway/Cooke, et al., October 1979, pp. 56-59	To qualitatively assess the likely fiscal impact of new development in the C-3 area under Proposition O.	SPUR STUDY (1975)	SPUR cost/revenue estimates for downtown in 1973 and for projected growth 1974-1990 were assumed. Proposition 13's effect on revenues and the possible need for increased transportation infrastructure were considered. Generalized conclusions about fiscal impact of new development were drawn.	1) After Proposition 13, "costs may exceed revenues in the downtown by as much as 25%." 2) "[N]ew downtown development will not solve the city's growing fiscal problem; without new revenue sources, development will make it worse in the long run."
Downtown Highrise District Cost Revenue Study, Arthur Andersen & Co., November 1980	To quantify for 1976-77 (pre-Prop.13) and 1978-79 (post-Prop. 13) how much revenue the C-3-O area generated and how much it costs to provide city services to the area.	Data compiled from city records and through conversations with city officials.	Only revenues generated within the C-3-O and costs of providing services to the C-3-O counted. "The principle guiding the study methodology was to calculate the amount of revenue that San Francisco would lose and the costs that could be reduced if the Downtown Highrise District were a separate city."	The C-3-O generated $56.79 million in 1976-77, or 61% more than the cost of city services to the area. In 1978-79, revenues were $53.29 million, or 48% greater than costs.
"Fiscal Considerations" Appendix C, 101 Montgomery Street FEIR, Recht Hausrath & Associates, January 1981.	Generalize conclusions about how post-Proposition 13 development downtown is likely to change the City's fiscal health from what it would be without new development.	SPUR Study, city records and conversations with city officials.	Under alternative assumptions about the cost/revenue balance in existing buildings and in new buildings, the fiscal impact over time of new development was compared to that of no new development.	"[A]n on-going process of new development would improve the City's fiscal situation. This beneficial impact would cease if new development were halted. This conclusion is tentative due to uncertainties about increased Muni costs."
Downtown Highrise District Cost/Revenue Study, David Jones, February 1981.	To quantify for 1978-79 the revenues generated by businesses in the C-3-O and the service costs imposed on the city and BART by the C-3-O.	Arthur Andersen study.	The Jones study differs from the Andersen study primarily as follows: 1) Costs of BART (but not revenues to BART) are included; 2) Only revenues paid by businesses and building owners are considered; 3) Muni deficit is computed differently; 4) Most costs estimated as percentage of revenues rather than actual service demand in the C-3-O.	The C-3-O imposed costs of $94.4 million on San Francisco and BART, or 125% more than the revenues the area's businesses and building owners generated to San Francisco.
Fiscal Impacts of New Downtown High-Rises on the City and County of San Francisco, Gruen Gruen + Associates, March 1981	To quantitatively estimate City revenues from the C-3-O and costs of serving the C-3-O in 1998, assuming the addition of 30 million square feet of building space in the C-3-O between 1981 and 1998.	Arthur Andersen study; data compiled from city records and through conversations with City officials.	"Only direct effects are considered." Costs are only measured for services "provided within the physical limits of the C-3-O district" and revenues are limited to "taxes on buildings within the district and the activities that take place within those buildings." Assumes the Arthur Andersen study is accurate and builds upon it.	In 1980, revenues from the 39 million square feet of building space in C-3-O were 1.66 times as large as costs. In 1998, after completion of the 30 million square feet of new space, revenues from the entire 69 million sq. ft. of C-3-O building space would increase to 1.92 times as large as costs.

SOURCE: Recht, Hausrath and Associates

APPENDIX D: TRANSPORTATION, CIRCULATION AND PARKING

TABLE D-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level of Service	Description	Passengers per Seat
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with less than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur which can rapidly cause operations to deteriorate.	1.26-1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability is extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51 1.60

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

30X MARINA EXPRESS - BAYSHORE AVE. AND ARIETA AVE.
Wednesday, October 7, 1981 - 8:00 A.M. - Inbound

J CHURCH - CHURCH ST. AND DUBOCE AVE.
Tuesday, September 29, 1981 - 9:00 A.M. - Outbound

SOURCE:
Environmental Science Associates, Inc.

FIGURE D-1:
PHOTOGRAPHS OF PEAK MUNI LOADING CONDITIONS

K INGLESIDE - VAN NESS STATION
Wednesday, September 9, 1981 - 8:00 A.M. - Inbound

N JUDAH - VAN NESS STATION
Wednesday, September 16, 1981 - 5:00 P.M. Outbound

38 GEARY - VAN NESS AVE. AND O'FARRELL ST.
Wednesday, October 21, 1981 - 9:00 A.M. - Inbound

38 GEARY - VAN NESS AVE. AND GEARY BLVD.
Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

SOURCE:
Environmental Science Associates, Inc.

FIGURE D-1:
PHOTOGRAPHS OF PEAK MUNI LOADING CONDITIONS

M OCEAN VIEW - CIVIC CENTER STATION
Wednesday, September 9, 1981 - 8 20 A.M. - Inbound

L TARAVAL - VAN NESS STATION
Wednesday, September 16, 1981 - 4 50 P.M. - Outbound

14 MISSION - MISSION STREET AND SOUTH VAN NESS AVE.
Tuesday, September 29, 1981 5:45 P.M. - Outbound

N JUDAH - DUBOCE AND CHURCH
Wednesday, June 8, 1983 - 8 00 A.M. Inbound

SOURCE:
Environmental Science Associates, Inc.

FIGURE D-1:
PHOTOGRAPHS OF PEAK MUNI LOADING CONDITIONS

PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in Urban Space for Pedestrians (MIT Press, 1975). Table D-2 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure D-2, p. A-** shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE D-2: PEDESTRIAN FLOW REGIMEN

FLOW REGIME/a/ FLOW RATE (p/f/m)/b/	CHOICE	CONFLICTS
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
Design Limit - Upper Limit of Desirable Flow			
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure D-2, p. A-51.
/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.
/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table D-4). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.

The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

SOURCE:
Pushkarev and Zupan

FIGURE D-2:
PHOTOS OF PEDESTRIAN FLOW LEVELS

The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.

The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza -which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture- have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.

Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

SOURCE:
Pushkarev and Zupan

FIGURE D-2: (CONTINUED)
PHOTOS OF PEDESTRIAN FLOW LEVELS

TABLE D-3: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

Level of Service	Description	Volume/Capacity (v/c) Ratio*
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.60
B	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61-0.70
C	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the highervolumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71-0.80
D	Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds (typically about 30 to 35 mph) than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00+

* Capacity is defined as Level of Service E.

SOURCE:
Environmental Science Associates, Inc. from information in the Highway Capacity Manual, Special Report 87, Highway Research Board, 1965.

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TABLE D-4: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE:
San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

APPENDIX E: AIR QUALITY - SAN FRANCISCO AIR POLLUTANT SUMMARY

APPENDIX E: SAN FRANCISCO AIR CONTAMINANT SUMMARY 1980-1982

STATION: 900 23rd Street, San Francisco

POLLUTANT:	STANDARD	1980	1981	1982
OZONE (O_3) (Oxidant)				
1-hour concentration (ppm /a/)				
Highest hourly average	0.10/b/ 0.12 /c/	0.09	0.07	0.08
Number of excesses of State standard		0	0	0
Expected Annual Excess (National)/d/		0.0	0.0	0
CARBON MONOXIDE (CO)				
1-hour concentration (ppm)				
Highest hourly average	20 /b,e/	10	8	12
Number of excesses of standard		0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9.0 /b/	7.5	5.3	9.1
Number of excesses of standard		0	0	0
NITROGEN DIOXIDE (NO_2)				
1-hour concentration (ppm)				
Highest hourly average	0.25 /b/	0.17	0.11	0.13
Number of excesses of standard		0	0	0
SULFUR DIOXIDE (SO_2)				
24-hour concentration (ppm)				
Highest 24-hour average	0.05 /b/	0.018	0.016	0.012
Number of excesses of standard/f,g/		0	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m^3)/h/				
Highest 24-hour average	100 /b/	173	103	126
Number of excesses of standard/g/		6	1	3
Annual concentration (ug/m^3)				
Annual Geometric Mean	60 /b/	52.1	56.0	57.0
Annual exceedance of standard		No	No	No
LEAD (Pb)				
Calendar quarter concentration (ug/m^3)				
Highest quarterly average	1.5 /c/	0.53	0.35	0.40
Number of excesses of standard		0	0	0

(Continued)

APPENDIX E: SAN FRANCISCO AIR CONTAMINANT SUMMARY 1980-1982 (Continued)

/a/ ppm: parts per million.
/b/ State standard, not to be equaled or exceeded.
/c/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).
/d/ Expected Annual Excess is a 3-year average of annual excesses of the National standard.
/e/ The California CO standard was revised to 20 ppm in January 1983.
/f/ Exceeding the SO_2 standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the national standard of 0.14 ppm applies.
/g/ Number of observed excess days (measurements taken once every 6 days).
/h/ ug/m^3: micrograms/cubic meter

SOURCE:
BAAQMD, 1980 - 1982, Contaminant and Weather Summaries, and CARB, 1980 - 1982, California Air Quality Data.

DATE: June 6, 1984

TO: Distribution List for the Stockton/O'Farrell Mixed Use Development EIR

FROM: Alec S. Bash, Environmental Review Officer

RE: Request for the Final Environmental Impact Report for Stockton/O'Farrell Mixed Use Development

This is the draft of the Environmental Impact Report for Stockton/O'Farrell Mixed Use Development. A public hearing will be held on the adequacy and accuracy of this document on August 9th, 1984. After the public hearing, our office will prepare and publish a document titled, "Summary of Comments and Responses" which will contain a summary of all relevant comments on this draft EIR and our responses to those comments. It may also specify changes to this draft EIR. Those who testify at the hearing on the draft will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification (usually about 9 weeks after the hearing on the draft); others may receive such copies and notice on request or by visiting our office. This draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a final EIR.

After certification, we will modify the draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the draft EIR, you will technically have a copy of the final EIR.

We are aware that many people who receive the draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the final EIR to private individuals only if they request them.

If you want a copy of the final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the final EIR.

Thank you for your interest in this project.

5268A:11/83

Department of City Planning
Office of Environmental Review
450 McAllister Street, 5th Floor
San Francisco, CA 94102

RETURN REQUEST REQUIRED FOR FINAL ENVIRONMENTAL IMPACT REPORT

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

To: Department of City Planning,
Office of Environmental Review

Please send me a copy of the Final EIR.

Signed: _____

Print Your Name and Address Below

_____